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OBSERVATIONS
ON
DERANGEMENT
OF THE DIGESTIVE ORGANS.

EDINBURGH
OFFICE
1870

OBSERVATIONS

ON

DERANGEMENT

OF THE

DIGESTIVE ORGANS,

AND ON

ITS CONNECTION WITH DISEASE IN OTHER PARTS.

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P R E F A C E.

A BELIEF that, so far as concerns the Digestive Organs, our different curative means are rather more promiscuously employed than is consistent with propriety, and a wish to extend the existing notions of local disorder, first induced me to hazard the present publication.

I consider the subject, at least in the present state of our knowledge, as embracing more than can be laid down in the formal manner of Symptoms, Prognostic Signs, and Cure; and, as unsuccessful attempts at what cannot be attained, are productive of confusion rather than improvement in science, I have, in the following pages, chosen a different arrangement. Were the knowledge of the causes of some phenomena of the animal body, healthy and diseased, more perfect, nosological arrangement might be much simplified.

Of the cases, there are not many which I consider very extraordinary, or such as, on the contrary, may not frequently be met with, were they observed; but it is in general for the sake of some leading feature, some point to be established, not particular detail on each occasion, that I have selected them; single objects of notice being thus sometimes endeavoured to be more strikingly point-

ed out, and made instructive. As, however, every circumstance which can influence a symptom, requires attention in practice or its history, any accessible fact importantly affecting the judgment to be formed on a question, when known to myself, is not omitted. A desire of making the full use of each case for the purpose described, without outstepping the limits of fair deduction, and of exhibiting their analogies in connection, so far as they will admit of it, has I dare say occasionally given to my inferences an appearance of uncertainty, or less simplicity in their combination than might perhaps be expected. This, if we are to be cautious, was found difficult to be avoided, and for indulgence in regard to it, or other imperfections, I trust to the candour of the reader.

He that registers faithfully the effect simply of different measures, performs a useful and important part; but the endeavour at the same time to ascertain their mode of action, or also as far as possible, the exact nature of an internal symptom, may be of much consequence in conducing to their consistent application, or to the discovery even of means, as yet untried.

Some of the facts adduced, may be such as are less generally adverted to; but where they are not in themselves new or unknown, if I have in any parts succeeded in varying their aspect, if pathology is in any way advanced by my efforts, I shall be sufficiently rewarded.

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ERRATUM.

Page 101, line 3, *after* those, *insert* shall.

OBSERVATIONS

ON

DERANGEMENT

OF THE

DIGESTIVE ORGANS, &c.

SECTION I.

*Introductory Remarks, and a Review of different common
Methods of Treatment.*

IN treating the disorders of the Digestive Organs, as on many other occasions, two very different sources of error lie before us. We may, on the one hand, infer too much, or we may, on the other, derive too little from particular cases, either of which will narrow, or at least be adverse, to our conceptions of disease. We must not act as if we could think only of what was last under notice, and of what struck the mind as more prominent at the time, forming rules too invariable in their application. This, added to the fear of innovating on what has been reckoned good in our

predecessors, together with the almost infinite variety of these complaints, is a weighty obstacle in the way of those who could otherwise look around and lend their assistance to the subject in question. As to the propagation and adoption of opinions which deviate from the beaten path, there are many persons who are led by prevailing ones, whatever these may be ; there are some who are fond of what is new ; and there are others who are apt to be startled at any thing that is not familiar to them, or been subjected to their own direct experience ; either receiving it with prejudice or rejecting it altogether ; so that we may expect to find individuals swayed in either way for or against proposed plans of treatment.

I am correct, I believe, in stating, that not only no general plan of treatment to suit all the varieties of derangement in these parts ought to be laid down, but that even the same individual, in different stages of one form of complaint, requires greater variety of management than many of the profession follow out in practice. Are we in every case to give opening medicine ? are we always to direct a particular system of diet to the almost exclusion of any other measure ? are we always to ex-

pect the same effects from free bodily exercise ? or is there any other general plan of treatment in the pursuance of which we may not be often disappointed ? In regard to some systems of regimen I remark, that of persons in health, one finds himself well in taking into his stomach a large portion of food at considerable intervals, the organ seeming to commence its office with more vigour under the stimulus of a considerable quantity ; another person feels it suit him better to eat frequently and in smaller quantity at each meal ; and similar differences brought about by being fed at particular times, are observable in the lower animals. Some men sleep more comfortably if they do not eat just previously to going to rest ; others awake with nausea instead of appetite, if they go to sleep with, as it is often termed, an empty stomach : The ordinary habits of different individuals in health with regard to the quantity of liquids they consume also, are very different ; and lastly, the same person even may alter in these respects at different times. Considerations such as these, and other original or subsequent differences of constitution in regard to various functions of the machine, presently to be noticed, should be held in view when we give an

opinion to those labouring under derangements of the digestive organs ; as they may frequently prevent us from forming too contracted ideas of cases in themselves complex and intricate : they will sometimes assist us also on the other hand in judging how far we are to control the patient's natural inclinations, inclinations which, in a state of health, are often the best guide a person can follow, though, in disease, obviously not always to be trusted to.

Functional disorders of the bowels long continued, will no doubt frequently become organic or those of structure, and may affect other parts in the same way, producing in them too, first irritation or disorder of function, and afterwards some irreparable disease : but it may be proposed as a question, are there any mere disorders of function in the abdominal viscera, which do not admit of cure ? There are some at least which do not seem capable of much more than palliation, and there are other peculiar obstinate states of these parts, which will often resist the premised emetic, subsequent purges, and concluding bitters or tonics of different descriptions ; in these the sufferer, after a variety of plans of treatment, will continue to say he does not feel his condition much, per-

haps at all improved ; and yet after all this, we shall sometimes have rebelling nature return by slow steps to its standard, and find the invalid restored to some degree of health and comfort. On the other hand, he would be a stubborn person indeed, who, because it is granted that we cannot be provided against every little hidden internal movement, and on this account may often be as distant from our point as ever, and because there are other cases where disease has been allowed to become too long established, should assert that our art had never been of any use in these diseases, has no control in this way over a local malady, or had never helped to drive away the vapours, as we doubtless may see various means had recourse to with occasionally evident and *permanent* benefit ; it were only to be wished that the cases could be oftener distinguished. We have means in our power then, which may sometimes prove powerful, and that we may duly estimate these, in so far as they are efficient or inefficient, before proceeding farther it will be right to consider respectively the following different subjects ; LAXATIVE MEDICINES ; THE REGIMEN OF ANIMAL FOOD, AND THIS COMPARED WITH THAT CONSISTING

OF SUCH VEGETABLES OCCASIONALLY AS HAVE A TENDENCY TO OPEN THE BOWELS ; RESTRICTION AS TO THE QUANTITY OF ALIMENT ; EXERCISE.

LAXATIVES.—The employment of these, and that for a considerable continuance, is what we generally look forward to with much and deserved confidence, but whether they are invariably admissible I shall by and by consider ; waiving this however for the present, and holding in view such cases only as are confessedly the fit subjects of these, I shall in the meantime notice some of them, and their modes of operation, though I may not here be able to offer much of what is novel.

Certain kinds of aperients seem to produce their effects more particularly by exciting the parts to secretions, others rather by stimulating to muscular contraction, and all of them more or less by a joint effect in both of these ways ; the effects of the same sort of medicine may in these respects be different, according to the dose or manner in which it is used. Some of them act rather on one part of the canal, others on another, and several of them extend their influence more equably over the

whole ; some do little more than increase the secretions, others have considerable powers in altering these, or by altering one, make this act upon and pervade the rest. On these accounts the choice of laxatives is by no means at all times a matter of indifference, and is a reason for turning our attention to the particular part or organ, and also to the extent of bowels which we judge to be the seat of the disease.

Saline medicines are pretty generally known to act rather on the small guts, and those consisting of aloes are very universally understood to be determined more towards the large, rhubarb by some, strongly recommended in jaundice, we should expect to act for the most part high up in the canal, possessing however certain properties peculiar to itself, and various combinations of the different laxatives, may be adopted to suit the particular end we may have in view.

Castor-oil is sometimes withheld lest it produce vomiting. When once fairly swallowed, if the effort of mind can command this, and in a sufficient dose to pass quickly forward without time to commence digesting like any other greasy substance, I consider that in cases of dangerous irritability

and sickness, it operates with much less nausea and more certainty, than some drugs which are less offensive to receive into the month.

Some consider that combinations apparently very trifling may be of no small consequence in their effects, but be this as it may, the catalogue of the useful need not be very extensive. The regulated periods at which we administer laxatives is perhaps of more importance than many of these admixtures, and under a state of derangement of the digestive organs, it is often as necessary, and requires as much or more consideration, to tell a patient correctly, when to avoid a laxative, as at other times to prescribe one. It is this principally which forms the difference between a judiciously conducted course of physic, and one that is not so, and for the same reason we shall often do wrong if in some forms of complaint we desire a laxative medicine to be taken in a stated routine, though in others this may more readily be admitted.

There are two medicines which I believe will oftener be found useful than many of the others, I mean the colocynth pill of the Edinburgh College, and the common blue pill; the first of these by itself, or varying it occasionally with some other me-

dicine, empties the canal throughout as well as one would wish when this is our object, and the second, from its powers in improving the secretions, biliary,¹ and others, is a medicine most deservedly in just estimation. After the removal of any great accumulation, if it has existed, these two medicines taken for a short while together, a pill of each at one dose, but this varied according to circumstances, will be found extremely useful : The compound rhubarb pills also are in general very serviceable in cases where laxatives must be employed. It is of much consequence that medicines taken in pill should not be very long kept in that form, as from the hardness they become uncertain in effect.

The bowels may not be quite regular, and yet the secretions not very far from healthy ; on the contrary, they may be pretty regular, but their secretions very improper ; the last of course are cases in which the mercurial alteratives will in all probability be of decided use. In the former a want of muscular force in the bowels may form a chief part of the complaint, though it may proceed from a different circumstance ; and there is often also

¹ See Note 1.

the mixed case, uniting in some measure both the above states. The absence of foulness on the tongue, however, I can aver from observation, is not always a necessary proof that mercurial medicines will not be of service; nor is its presence, on the other hand, a proof that they certainly will, though it generally indicates where we shall with advantage prescribe their employment.

After the use of aperients, a few bitters or tonics, as has been customary may now do good, and one great use in them is, that they sometimes make patients, from the idea of their taking physic or being under medicine, more circumspect, and attentive to their own diet than they otherwise would be.

Thus much at this time regarding laxatives, when these are to form a prominent feature in our line of treatment.

THE REGIMEN OF ANIMAL FOOD AND THIS COMPARED, &c.—The effect of using a larger portion of animal food and less vegetable than is customary to one's ordinary habits, has now for a considerable while occupied the attention of medical men, but never till of later years, so far as we know,

has this system been pushed to the extent it now sometimes is. We are not now quite so afraid of corruptions of the fluids, with other evils which it was once supposed must necessarily take place in the human frame under such a plan, as the body is seen to all appearance fair and sound in the exterior after a considerable adherence to this; but whether it is so well able to resist some species of disease while in this state, is a point on which we cannot so confidently decide. The advocates for this system, when an individual that is adhering to it sinks under some other disease, say he would have died of that disease, though he had not been living in this way; those on the other side of course are of the opposite opinion; nay perhaps even look to it as the original cause of the particular malady which may have killed. This is not however so much to our present purpose; what we have now to consider is its effects in particular on the organs appropriated to digestion.

A point I consider as very well ascertained is, that in many constitutions animal food, independent of its passing, in certain states of the organs, easily from the stomach and neighbouring parts, without the occurrence of oppression and other

symptoms so difficult for a dyspeptic to describe, seems to enter successively the various inferior portions of the tube, and at last to be discharged by stool, with more regularity than happens with vegetables : this is its effect in many cases of mere torpor of the bowels, where the stomach itself is not at all in fault, I should say rather, where the stomach does not exhibit such signs as would generally be thought unhealthy. What we are occasionally to expect from such things as honey, some kinds of fruit, malt liquors, spinage, &c. with the bulk of mankind, is, that they shall assist willing nature, and readily pass off ; but in cases where there is a strong tendency to torpor of the bowels, these articles of food either do not open them at all, and then they are almost certainly prejudicial, or when they do, sometimes though taken in quantity, act like too slight a dose of medicine, tease the bowels, and passing off singly leave other matters taken along with them behind, nay if solid, often come away themselves in a half-digested state, their more watery part having speedily yielded to the stomach. As happens with medicines, the same article of diet which changes secretion is not always

equally favourable to the contractile powers of the bowels, sometimes even seeming to be the reverse of this, and *vice versa* ; we must not always expect that what at the time produces increase of the moving force in the gut is to benefit the condition of what is thrown off. Where there remain any tolerable powers of action in the canal, animal food appears every part of it to undergo digestion, including various changes, and without influencing much the other contents of the bowels, except in so far as the proper or improper action of one part of the intestinal tract is likely to entail the same on the rest of it, seems all of it that is not taken into the system, to pass steadily downwards in its turn, affording a more uniform if not so sudden a stimulus to the parts : or instead of saying stimulus at all, we ought perhaps to consider it in a different light, regarding it on the principle that it does not enter *too* readily the commencing lacteals, an idea rendered probable by the common, almost universal notions of what is heavy food. To this we shall afterwards advert, but without the turmoil of more conjecture now, let us take the practical fact which is a useful one, and pursue our subject. What

is passed is more apt to be in a formed state than after vegetables, and this is of great importance, being the sort of alvine discharge which in these cases is less likely to be followed by deficient or improper action in the parts. Where medicine has been long used, the first spontaneous evacuation of the bowels under this regimen, judging from cases where it has been tried, will not perhaps take place for a week or more from the period of its commencement, at the end of which time, nature often without accompanying head-ach or considerable visceral irritation of any sort, begins to discharge a little by stool, and this increases from time to time, till the proper quantity comes to be thrown off on each occasion.

One may be startled at the mention of a week, but this and much more, if on our guard against urgent symptoms arising, need not in the least alarm. A single laxative or two, so as to clear out some of their former vegetable contents, before attempting to bring about the bowels in this way, would in most cases be prudent. In some persons the substitution of fish now and then, for a single meal, or a part of one, serves the purpose of flesh ; in others this sort of food is not found to

be at all suitable. Bad air and mental anxiety, we ought to be aware, are usually most unfavourable concomitants, when we hold forth to a patient the prospect of relief from a system of this sort in diet, as indeed they are on many other occasions: The air of some towns for instance, is generally rather undesirable.

We may perhaps find in the vegetable class, some exception to the fact I have stated in regard to such of them as have an opening tendency, but still the general fact holds good with respect to most of them. Some objections to this system of animal diet will fall to be considered in another place.

RESTRICTION AS TO THE QUANTITY OF FOOD.

—This has been properly pointed to, as a most indispensable requisite in the cure of the disorders of the digestive organs, whether the disease is confined to these or has shewn itself locally with pain and its concomitants in other parts of the system. If a man has brought on himself a fit of the gout by errors in diet, if one has an expectoration of mucus from a similar cause, if a person has on any part of the body an irritable sore, which will not

heal in consequence of irritation kept up by continued surfeiting, as we shall suppose sometimes happens, no one in his reason, far less an intelligent practitioner, would hesitate as to the necessity for greater circumspection in this particular. If too, a person complains of nausea, because day after day the stomach is loaded with more food than even a full appetite would lead one to consume, and has heartburn, occasional acrid diarrhœa with other unpleasant symptoms from the same cause, knowing the root of the evil, we should along with other plans of relief, whatever these might be, enjoin a degree of abstemiousness as indispensable. But the question here arises, is there not a limit to this? In certain cases of idiopathic dyspeptic complaint which does not shew itself otherwise locally, I should be disposed to say there is; and that in the hopes of effecting a more speedy cure we may sometimes in these cases be wrong, in telling a man to check his inclinations to eat, when these are not palpably much exceeding what they ought to be. In important local external or internal diseases connected with some derangement in these parts, and where inanition need not be dreaded, we shall seldomer err in pressing abstinence and regularity

to the full extent with which a patient will comply, yet even then, circumstances which will be considered in another section, ought to be taken into account. In the meantime, the following comprehensive remarks are not to be neglected. "The effects of food and medicine can never be considered as resulting from their operation on the stomach solely, but from their conjoint influence upon the nervous system in general. Irritability of the stomach may arise from that of the brain, and unstimulating diet may tend to tranquillize the latter organ, and thereby alleviate the disorder of the former. On the contrary, a more generous diet may, by exciting the nervous system, produce that degree of energy in its actions, which invigorates the stomach, and tranquillizes its disorder. It may farther be observed in some cases, that the kind of medicines or diet which is serviceable to the stomach may aggravate the nervous disorder; and, on the contrary, that those means which seem to tranquillize nervous irritation tend to diminish the powers of the stomach." This it will be seen is to be viewed in different ways, and some would be disposed to consider the nervous system, when thus quieted, to be so only

at the expense of the parts in the abdomen, in opposition to which it must be said, that the whole body seems often to thus improve. In regard to local disorder, pain may arise either from high active inflammation or the duller irritable state of a part.

Could a man foresee an attack of derangement in the digestive organs, from improprieties or excess in the article of food, there would be little doubt of the course to pursue in immediately being more cautious in this respect, than many individuals unfortunately are ; but disease once being induced, matters are no longer the same, and the excess in quantity, if to be withdrawn, may in some constitutions require to be done by degrees ; whatever the human stomach is in a state of nature, I am certain that there are some states of disease, in which it does not always digest a very small quantity of food so well, as what may be called a comfortable meal ; it has perhaps long been accustomed to the stimulus of an over quantity. Observe the effect of a very small portion of food taken a little previous to a regular meal : Instead of its proving what is vulgarly called a whet, in a healthy stomach it often takes away all desire for such a

quantity of food, as even an abstemious person would take into his stomach at a due interval from the period at which he last ate ; and one cannot suppose that this repeated frequently in the course of a week, would benefit the health of persons in general regular in their habits.

If the stomach is out of order, say some, give it rest, meaning, not to employ it in digesting much food ; no doubt this is very often the wisest prescription we can offer, but this is perhaps not always the case. A bruised or over-worked muscle is improved by rest, a weak one by moderate exercise ; and that degree which is moderate can only be ascertained by reference to former habits, for what is effort in one person, may scarce deserve the name in another ; but the bruised or over-worked muscle too, must likewise after a time have this moderate exercise, before it recover its full tone : An arm long tied up will in time shrink instead of regaining its powers. The digestive organs even in their secreting function may be similarly considered. Certainly, there are digestive organs naturally strong, but often in various ways abused, naturally weak and prone to disease, but never much exposed to what is to injure them ;

lastly, naturally weak, and, added to this, frequently under the operation of hurtful causes : Any of these states may be the case, and from differences in these, along with differences in the period of life and sex, may arise various modifications of the diseases in question. We shall do well then to attend to what have been for some time a man's habits with regard to his quantity of aliment—to look back to a period when he was, or accounted himself, in health.

Continued surfeiting, even on food simple of its kind, will cause disease ; but when we see a person with tendency to dyspepsy exceeding in this way, are we always to set down his complaints to this origin ? Their aggravation at any rate, one would be apt to imagine, we might fairly expect from it ; but are we not justified in supposing, that, in certain constitutions, very strong disposition to the disease sometimes exists as it were from nature, and that this is nothing more than what, in setting up new processes, she herself dictates, to ward off the accession of still more intolerable sensations and diseases ?

It is a good rule not to eat when one has not a desire for food ; but will a person with deranged

digestive organs always err, in taking a moderate meal at certain times, even though it should not be with a strong call of hunger, or very great desire for it? In certain listless states of the general muscles of the body, exertion at first very irksome, persisted in for a time, often becomes less so; nor does its removal in this manner make way for a more frequent return of the unpleasant state; on the contrary, there seems sometimes no better remedy for it. May not the like reasoning, by analogy, apply in some degree to the anorexious stomach, and even where the very want of appetite is owing to an over-filling up and sympathy with torpor in the lower or other part of the tube, or to the torpor rather where there is little contained in the large intestine, may not the stimulus of the stomach put in action in this way, propagated downwards, or in some manner affecting other parts, and becoming muscularly propelling, occasionally assist in producing alvine evacuation, which might not so readily take place when longer delayed? The stimulus of distension of the gut to a certain extent is necessary. Let it not be supposed, however, that I am thus advocating the ridiculous practice of forcing the appetite, and overloading

the stomach for any purpose, which there is every reason to believe will then on the other hand even present an obstacle to the peristaltic muscles. The organs in the matter of over-appetite, the more this is encouraged and fomented, seem for a time within a certain degree to provide powers for themselves,—a circumstance which makes the natural boundary occasionally somewhat undefined, so that what I here say is to be received with limitation; but this much I must remark, that a continued restraint of the appetite when no medicine is taken, I am apt to suspect, will, in many persons, be found to increase the tendency to slowness of the bowels. By continuing the feeling of hunger, you keep up a particular sort of action in parts, where, as we shall afterwards see, it were desirable it should sometimes change itself for a different one, and permit this other, on each occasion, to establish itself. It sometimes happens, that even a strong dose of medicine will not pass through till a little food or drink is taken after it: And if we are to be informed from the converse, we are only to recollect that lessening considerably the quantity of food, will sometimes check a diarrhœa so obstinate as to have resisted every other usual remedy.

In this point there is the utmost variety, for there are many persons, as we well know, who take food with relish, yet do not digest it; and to the contrary of this I can affirm, that I know instances of individuals, who declare they scarcely ever have the sensation of hunger at regular intervals, (though they may feel faint when they fast too long,) and yet seem to possess very tolerable digestion, and are rather of a loose habit of body; others, however, when the regular call of hunger is deficient, feel themselves sensibly out of health. Attention is to be paid to the brown tongue in many of these cases; indeed, this will be found present oftener than is generally supposed. Fœtor of the breath I may here observe too, is very often entirely absent, in considerable degrees of derangement in the digestive system, when, on the other hand, persons very triflingly, so far as can be perceived, if at all affected, have much of this unpleasant symptom, and as I think often unconnected with the local state of the teeth, which are known sometimes to have this effect.

As to restraint in the use of fluids, I shall at present merely observe, that in general this is one of the most important coadjutors in any system of

relief we can propose for those labouring under various forms of the complaints we are now considering; its effects on general plethora I do not here so much consider, though there are some symptoms of digestive derangement which may perhaps be influenced even in this way.

EXERCISE.—We come now to the last of the subjects we proposed to consider in order,—Bodily Exertion. Violent exertion in good air will sometimes enable or compel, if I may so speak, the digestive system to overcome such a quantity of food, as it would not otherwise do; but there is a limit to this, and even what is here said applies only to an individual still in a state of health, or at least exempt from certain kinds of disease in these important organs. It must also be observed, that the above is to be taken in another point of view: As the lower animals lie down,—as many of them sleep after feeding,—as many persons of robust frames have this propensity, so far as regards the first digestive processes our food undergoes,—it is probable that exemption from much action is often favourable to these. It is rather in the subsequent steps of the conversion and assimila-

tion of our food, or in this step continued without some change in the action of the parts, that inactivity and tendency to sedentary habits are likely to beget the diseases which the obeying a natural call to exercise might avert. This last, however, will be according to the state of the parts, and as to the former simple fact, where I use the word favourable, let it not be supposed, as will be hereafter seen, that I wish, at the same time to convey with it, in all cases, the meaning, expedient.

Slow or gentle exercise, long kept up, perhaps increased during its continuance, and more violent exercise persisted in for a shorter time, have, I am inclined to think, very different effects, and the one sort suits persons in one state of health, and the other those in a different one.

Many individuals who confine themselves much to the house, seem to have very good health, whilst others under a moderate share of exercise, nor yet much exceeding the former in the food they consume, do not enjoy the same degree of it. The latter class may be able to undergo more real causes of fatigue, when called upon to do so; the former may be able to preserve health, without requiring

for this purpose to make any considerable muscular exertion; which of the two is to be called the really strong constitution, I leave my reader to determine. This much I know, that there are individuals easily capable of, and who do practise great bodily exertion, who are yet, what many would be disposed to call of a weak constitution; that is, if they are withheld for a day from their customary bodily efforts, they feel deranged and out of health. Instances of this are not wanting even in the labouring class, which many would say is altogether the effect of habit; the machine, accustoming itself to its circumstances; but though it may in some degree be the case, to this opinion there are considerable objections. There are those of the profession who would connect these differences with what some call the irritable temperament. There are persons, to whom for a long while at least, it does not seem to signify much how they live, in various respects, in whom it would be absurd to pay much attention to what may slightly influence the health, those possessing what is usually understood by a powerful constitution; but in truth, though in this respect there

are undoubtedly differences, some may be said to be strong in one point, and others in another.

Individuals are, in general, and mostly always think themselves benefited (for idea will perhaps operate a little sometimes) by exercise, during some part of the twenty-four hours. This, whilst their digestive organs retain certain powers in producing the first changes which our food undergoes, will I believe generally be the case, but, in particular states of disease, does not always happen ; and alteration in the state of the organs having from some cause taken place, what was necessary to preserve health, may not, in every case, be the direct way to restore to it in disease. Exercise will require to be very moderate in some of these cases : the enfeebled stomach with other parts, too readily now sympathizes, although without much engagement of the mind, with very slight degrees of fatigue in the muscles, which, also, in general is at the same time so easily produced ; and we seldom then, as usual, see appetite after very full exercise, although the person should continue capable of considerable degrees of it, and notwithstanding at a former period, he may have been in the habit

of practising a great deal of muscular exertion with the utmost advantage.

Indeed, it is nothing new to hear those not of the profession talk of "a fit of the bile" being brought on by over-exertion and fatigue, or improperly timed exercise, in persons of particular constitutions, and unaccustomed to activity.

The effects of *occasional* exemption from our usual motion and employment of the muscles, in inducing appetite, and permitting the former meal to pass on, or whatever happens, at least, in inducing appetite in persons in health, may be exemplified in what we must all of us have scarce failed to remark, in families of young children and others, if not in too close an atmosphere, when kept in the house by bad weather, a holiday, or otherwise. The circumstance to which I allude is, how apt they are, at such times, to have something more of a desire to eat than if they were going about their ordinary occupations or amusements out of doors.

We need not cite, at any length, the experiment of Dr Harwood, where he killed two animals a short time after feeding them. The one, meanwhile, being left at rest, and sleeping, had digested

what was given to it, which was not the case with the other in exercise, nay, considerable exertion. It is here meant emphatically, which, in eagerness to accomplish an object, supposes something rather more than mere bodily effort, so far as this can exist separately from the other. The effects of exercise on the digestive system, and whole body, whether they prove advantageous or not, last of course for more than merely the time it is used, and will continue for a while, longer or shorter, according to difference of constitution, and other circumstances. This, in our making choice of it as a means of cure, is of importance.

If exercise is taken for the purpose of aiding the bowels, that had recourse to in the morning a short while before breakfast is very efficacious. This was first mentioned to me by a young officer of the Guards in London, who being afflicted with strictures in the urethra, and having his attention a good deal directed to the state of his general health, had found the advantage of it in this particular. I am now confident, from a more general experience of it, that it will be found useful with many. It seems to stimulate, rouse, or excite the whole system more than at another time.

We must not however suppose it is to preclude a share of it during other parts of the day.

Before leaving this subject, I must notice a very important effect of exercise on what has been called the irritable heart, which is more apt to annoy whilst the person is tending to sleep, and which often exists where the digestive organs are apparently very good ; or, at least, if disease in them is the cause of it, they sometimes do not show it in any other symptom. Over this sort of palpitation, the animal food diet has considerable influence, frequently, although not always, a beneficial one ; but a good deal of exercise daily has, I am inclined to think, a much more decided effect, whether you are to explain it in some other way, or by some of the following modes, viz. by saying that the action of the voluntary muscles each time wears out the irritability and nourishment of the heart or nervous system ; or that they without wearing it out, become, in consequence of their action, themselves for a time the subjects of it ; or in a manner which will be more conformable to some modes of thinking, that, so far as this symptom is concerned, the exercise, by hurrying the circulation steadily for a time each day, overcomes ob-

struction in the vessels situated at a distance from the centre of circulation : For a tendency to this seems now looked on as (see *Med. Chir. Trans.* Vol. VIII. p. 487,) a very probable origin of change of structure about the heart itself, when this organ assumes its deplorable diseases. This account of cause for disease in the heart, I think extremely probable, as, in the case of a young person where, though inspection of the body was denied, there was every reason to believe the existence of organic disease of the heart, the individual, by persisting in efforts at motion, instead of bringing on a suffocating paroxysm, used to be relieved for a time from the beating at his breast. I at one time thought, that, if this be correct, unfortunately, the exercise, though alleviating, in cases of mere irritable heart, the annoyance of the palpitation, which in general is not so apt to be felt or attended to, nor is indeed, I believe, in fact, so great when once in the erect posture, might nevertheless, by racking the heart and great vessels, equally lay the foundation of real disease of structure in that organ. I am, however, now confident that it will endure much before any such consequences ensue, and which,

sufficient exercise, if not too late, may in some habits even be a means of averting. Though in all animals exercise appears to hurry the circulation or does so in fact, yet if the fingers be applied to the pulse while walking or while in a carriage, the systole seems less perfect, as if partly interfered with. In the erect position, which exercise implies, opposed to a reclining one, which a weak person is so apt to assume, the influence of the brain is diminished ; as also probably by gravity, the flow through and influx from the thoracic duct, more particularly soon after the reception of nourishment. The abdominal viscera likewise do not press so much on the contents of the chest.

Much exercise sometimes does not agree with these cases ; and even where it does in general, I have seen it necessary to be avoided for several days continuously in certain states of the system.

The motion of wheeled vehicles, where there is scarce any action of the muscles on the individual's own part, is sometimes strikingly useful in cases of irritable heart.

I should be desirous of seeing the following ve-

rified in a greater number of instances, but I have watched the labouring pulse of some persons who have undergone repeated venesections for common apoplectic or paralytic tendency, and have often perceived that it becomes smaller and less resisting immediately after having recourse to a degree of slow walking exercise, irksome as this must usually be to such patients. Nourishment of all sorts was in these very sparingly permitted, wine or other such stimulus being entirely avoided by some.

I may remark, as to regimen in an extended sense of the word, including diet, exercise, or the avoiding it, employment mental and bodily, in short, the whole system or mode of a person's life that, compared with the influence medicines, in particular, have on the body, it is quite plain, that, as the former supposes causes which are more constantly operating, it is necessarily of the first moment in the cure of disease ; but the difference between the present and remoter effects of any measure we may employ, when in opposition to each other, ought to have that share of attention which its importance demands.

SECTION II.

*Considerations respecting open and constipated states of the
Bowels, &c.*

HAVING now noticed in succession the above important measures in treatment, and taking it along with us that there are cases requiring some combination of these, or the use of some one more particularly by itself, I proceed, in the course of what follows, to compare them as occasion offers, returning in various ways to their several application, or the symptoms which would suggest them, and enter farther on the object of our present research.

When we find an obstinate cough yield to the use of iron, from which, *a priori*, many would have expected exacerbation of the symptom; when we see one recommend purging in chorea, nearly to the exclusion of all other remedies; when an-

other shall choose to use such medicines as nitrate of silver, arsenic, &c. the individual still getting well, although the last do not so certainly purge ; when we hear another has employed blood-letting for this disease ; when we see an intelligent surgeon recommending aloes in hæmorrhoids, whilst most others exclaim against it ; and all these too, they tell you, proceeding on the basis of experience, need we wonder at certain obstinacies of opinion in others, or hesitate to allow that similar circumstances may occasionally warp our own judgment ? In instances like the above, no doubt, recovery sometimes takes place without, or, shall I say, in spite of our remedies ; but are we, because the same disease sometimes gets well under the most opposite treatment, to set down our art as useless on these occasions ? On the contrary, from a reason of this sort, no one should draw such an inference ; yet, in fact, what we have now stated is a principal cause for the discordancies of opinion among the profession, (discrepancy of opinion, indeed, where men have the same opportunities of observation, is remarkable in a general point of view,) and makes it difficult to arrive at certainty on many subjects of our art, still more on one so complicated as the present.

It has been long said, that we often can do nothing more than palliate symptoms, but I shall remark, that with regard to a *course* of mercury, independent of its effects in syphilis, and the influence it is acknowledged by many to possess in controlling the adhesive inflammation, with regard to such medicines as the nitrate of silver, arsenic, and the effect of other expedients occasionally put in practice, I am apt to believe that all of them, when they seem to exert any secret influence, act by some new situation in which they place the frame, or a particular portion of it, that even where one of them is useful, another might have had a similar effect, that all we can do by this, is to allow the parts the chance (if I can be excused the expression) of falling back into their former actions,—to permit them to return to what is healthy, not that our remedies have really any direct power to induce this change. This I conceive to be the state of matters in many cases of recovery, where it does not appear clearly what has happened, and which, in familiar language, would be termed curious or singular cures. We have it in our power though, to keep up this change of circumstances, this new situation or condition

in which we place the parts, I do not know how otherwise to express myself, for a longer or a shorter time : our medicines and other means may be used but once or twice, or they may be continued in the form of a course, as we term it, and we sometimes, I believe, use one remedy rather than another, only because, from more frequent experience of its effects, we judge it may more safely be employed : but when the more permanent change does not happen either spontaneously or from the effects of medicine, and that any thing has this power many will deny, other things which we may now direct, or may have been all along prescribing, will then truly be only palliatives, which may be followed by two very different consequences, either that circumstances may be such as to make their further employment no longer necessary, or they may require constant repetition, and that very often in increased doses. This necessity for repetition applies strongly to certain states of the digestive organs ; but to make myself understood to the full extent on this head, let us take it in the following aspect.

We are all of us aware, that of individuals seeming to enjoy health, there are two different classes

with their bowels habitually in the most opposite states, in so far as regards a tendency to openness and the reverse of this ; what is passed differing also more or less in its nature and appearance. But though this is an important distinction, it is not so strongly marked in the circumstance itself, as in the different result which follows the use of aperient medicine. In all persons, after the operation of a strong purge, a tendency to inaction in the bowels may shew itself for a single day, as might indeed be expected, the parts being thoroughly emptied ; but in the former class, I mean those of naturally open bowels, should an occasional fit of constipation attack them, should this, from their own neglect, be even somewhat protracted, the use of a smart purge, followed up by several smaller ones, will in them, instead of increasing the disposition to this complaint, after *quitting* their medicine, be succeeded by the very opposite effect : And to these, I believe, applies with full force the common idea of relieving the overstretched parts, of allowing them to return to their natural calibre, of never suffering them to be again too much distended, of which they are in some persons capable of being to an incredible ex-

tent, and sometimes under the most fallacious circumstances ; in this manner restoring their tone, as it is called. But in those who are constitutionally of the opposite habit, who have been so almost from their birth, I am most firmly persuaded, from various cases, that such a change will be but rarely effected in this way, at least where the mere continued use of common aperients forms the whole of the treatment : Yet many of these are strong and healthy people, some of them less apt to be delicate, as we say, than individuals of a different nature. These cases seem to stand thus. Their alimentary canal possesses very active absorbing powers, while its peristaltic movement further down, from the consequent slowness with which any bulk of content can thus accumulate, is not excited by the requisite quantity, necessary to give stimulus in all persons, and produce more frequent alvine dejection. Appetite, whatever we are to say of it in most persons, seems in such to depend much on the activity of this absorption. I do not say entirely, for where their peristaltic movement is by any means artificially or casually increased, without producing sickness, you will find their appetite occasionally increased also ; but

much depends on the first cause, though a certain balance and proportion between the two is probably necessary for this. Some may be disposed to say, this greater absorbing tendency is forced into action by the very weakness of the propelling powers. I can conceive this in some instances to be the fact, and that the peristaltic movement is in itself faulty ; but if we look at the vigour of the whole muscles of the body in many of such persons, it is contrary to all just analogy to suppose that it should be deficient here and here alone, and must attribute the apparent weakness in the propelling powers to the cause assigned.

The day following the use of a laxative, such persons feel light and comfortable; but unless they are to continue the employment of these, this agreeable state will not last, and they will be apt to suffer a degree of uneasiness, a feeling of stuffing after an ordinary meal, till their intestines recommence to unload themselves in their accustomed way, till a greater degree of action, or their usual sort of it, again begins in certain parts of the canal; for on this, rather than the quantity evacuated, does appetite, and other circumstances, seem at times in a great measure to depend,—in these cases,

when they return to a still more constipated state for some days after the medicine has ceased to operate, the oppression is less, just before the bowels are again going spontaneously to throw off their contents, than it was the preceding day, though they may now have some slight additional accumulation from the former days' food, the presence of which is going to put them in more active movement, and though they may empty themselves of but a very small quantity at this evacuation. The keen desire for food under a partial degree of constipation, in persons unaccustomed to a sea voyage, but not suffering from sickness, is an additional proof of this opinion. And in general, though eating sufficiently there is not so much voided at a time every other day by persons who are decidedly of this habit, as there is on each occasion daily or oftener by those who are not so constituted.

If some of the above views are well founded, are we always correct, I would ask, when called to one with some trifling complaint, not immediately connected with the bowels, in prescribing a laxative, which, in this country at least, is not often omitted, by any who have studied the rules of our art

but for the shortest period ? I should be disposed to say the employment of a purge may be made too much of a matter of course, when we reflect that there are individuals who, for several days after, experience some inconvenience from this, indispensable as it is frequently found to be.

As to the continued use of laxatives, I do not believe the experience of practitioners who have attended much to this subject, will afford many instances where their use, particularly that of aloetic ones, has been very readily relinquished, bearing in mind, however, that I mean here, in the sort of constitution we have just noticed. With regard to aloes uncombined, it is a medicine, which, in the form of pills, is so convenient, and acts in general so well, without producing nauseating effects, that individuals are often tempted, as it were, into the use of it ; yet for those of habitually slow bowels, when they are to use an occasional aperient, or a few in succession, not with the intention of continuance, let it be observed, I would recommend a very different sort of medicine, for reasons I shall endeavour to assign. This complaint *appears* in most persons to be situated low down in the tube, and in the great intestines ; but from what has

been above stated, one cannot doubt, that though, from their nature, the consequence becomes first manifest in these parts, it has had its origin in the manner in which a higher part of the canal performs certain functions. The large bowel then in such, is only indirectly affected ; effects exhibit themselves here, but have begun elsewhere ; it is not on its own account to be reckoned a weaker part where the tendency to disease exists, though it may first demand our attention. Aloes, and similar medicines, or an injection, may be very proper at first, but medicines of a very different kind are to be then used ; if in applying a remedy to the seat of disorder we consider its origin, we will not continue to stimulate this part. What now in general answers much better is saline medicine ; by sending down on the lower bowels, secretions from the upper part of the canal, this lubricates rather than directly stimulates the great intestines. It is in this way, that the Epsom salts and others, when occasionally had recourse to, are so much less apt to leave persons of this habit in the constant necessity of repeating their medicine. It affords the parts something to throw off, it interrupts and changes the too active state of absorp-

tion higher up, which bears this sort of treatment well. Medicine of a different description, more particularly when it produces no approach to nausea at the time, leaving the stomach in its usual condition, food being taken in perhaps even greater quantity, increases the very state which we are desirous to remove. I shall mention one case, an extreme one I own, but by no means standing alone, against the continued use of mere aloes; it was that of a lady, who, at last, took frequently ten or a dozen of the common aloetic pills at once, to procure an ordinary evacuation in her bowels; this case yielded to the flesh regimen at the time it was tried, but whether she is still alive, or in what state of health, I do not know. The treatment of the case was not under my own direction, but that of a person on whose veracity I could depend. Before the change to the better in the bowels, it was attended with other aggravating circumstances, in a constant tendency to miscarriage; but on this, of course, we cannot here enlarge farther than to state, that so far as relates to the improved powers of gestation, I shall add conception, under this treatment, the case is not solitary.

It will most readily, however, be admitted, that cases do occur, where the aloes is the fittest medicine, and that where drugs absolutely cannot be dispensed with, from inaction of a part quite confined to the large intestines, or near the rectum, which we cannot expect ultimately *to cure*, it would be most absurd to fret the whole intestinal canal with general purgatives, “for the defective action” of a “part which is most remote from their influence.” There is an instance within my knowledge, of an individual who has been long teased with frequent unavailing calls to stool during the night, accompanied by some gnawing pain, and scarcely voiding anything each time; but this person by taking two of the common aloetic pills, before going to bed, has frequently enjoyed from them a benefit actually similar to that arising from an anodyne; as the medicine, by overcoming some local obstruction or lodgement, and consequent irritation, prevents the continual disquietude in the parts, and a proper quantity is discharged on the following morning in a more natural way.

When impaction of the bowels does take place, it is more likely to be serious under mixed, or

more especially vegetable aliment, than where the person is living almost entirely on flesh ; but I can assure my readers of a circumstance, which may be a matter of surprise to some of them, as it was at one time to myself, viz. that there are individuals who, though eating heartily of ordinary food, taking exercise, and in their usual spirits all the while, are now and then fourteen days or more without alvine evacuation, a period which with many would be productive of the most serious consequences. I could mention cases where disregarded constipation had existed without serious inconvenience, for longer periods than I have here specified, and I could also mention some in which still larger doses than what I named, of certain medicines, had become necessary, but what I have already narrated is sufficient for my purpose, and I can better vouch to my readers for its authenticity. The following, however, which appeared at the end of a former edition for reasons there assigned, I here give. A young lady became subject to irregular motions of the muscles, a degree of the St Vitus affection, and other complaints, for which it was judged necessary to give laxative medicines. Change in her ailments not

taking place so quickly as could be wished, attempts at forcing the bowels were made, stronger purges, so long as she could be prevailed upon to take them, being persisted in with less and less of their usual consequence in operation, till I may say aperient effects seemed almost incapable of being produced. She herself now resisted efforts to induce her to take physic ; and after being six weeks without alvine dejection, at the end of this period she had a spontaneous one, and after another long interval, she had several at the shorter distances of from two to three days. Under this state of constipation, her appetite was by no means deficient, and her original complaints, if not improved, were certainly not aggravated : The whole appearances, however, were very unfavourable. An important consideration in this instance is, that she was not constitutionally and previous to this of the constipated habit. Remarks on this case I forbear ; but I mention it, as having occurred under the occasional attendance of one of the first physicians of this place.

I knew an instance of an old gentleman, who used to say, that during the whole course of his life, when well, he seldom had evacuation from

his bowels oftener than once in three days, and that when at any time he became loose in them, he felt deranged, and out of health. Yet this person, with this peculiarity, was of a very stout make and active turn, never afflicted with any important complaint, and arrived at the age of eighty or upwards, though more than once in his life severely wounded. But it will be argued by some, in regard to this case, or a similar one, that though he did live to this age, had it not been for this peculiarity of his constitution, he would have attained a still greater ; that it was owing to other important parts of his frame having been more than ordinarily adapted for duration, so as to counterbalance what we mention, and which they would reckon faulty in it ; to this, however, I shall not make any reply, but shall content myself with one obvious inference from such a case, viz. that though derangements of the digestive organs are undoubtedly often productive of much mischief, such a state as the above is not always inconsistent with what would in general be termed vigorous health.

These states of the digestive system are singular, and not natural to most people, yet not per-

haps much more to be wondered at, than many anomalies and idiosyncrasies ; such as that one man's pulse should always intermit when in health, so opposite to the condition of other men's circulating systems, another be affected with cramp, on drinking any of the clarety wines, though able to take as acescent ones, or other liquids of that sort, with impunity, that opium in some persons should produce laxity of the bowels, or on some occasions even symptoms resembling spasm in them, with other endless varieties.

It may be questioned, however, how far an individual, with slow bowels, one naturally of that habit, is to yield to this tendency ; for without regard to any chance of actual obstruction and inflammation in them, I must observe, that I have known where a person was in the way of frequently, at particular times, remaining without alvine evacuation for a week, with apparently perfect impunity, when it was persisted in under circumstances still more unfavourable to this state of the bowels,—that in the clogging of the system, inaction was at last propagated upwards to the stomach and adjoining intestines, which, till this time, had preserved entire their peculiar power whether we

call it strong or not, and performed certain functions though no load was forced on. A state of dyspeptic disease, formerly quite unknown to the individual, and which it will not be in our power very readily to subdue, may then succeed, and doses of laxative medicine will now probably become constantly necessary, and even when employed, very inadequately relieve sensations of oppression and uneasiness, which may never, as I have said, have been felt previous to the morbid alteration that has now been induced. Persons with healthy digestive organs, if they should accidentally overload their stomach from occasional inattention, will have its contents either presently ejected by vomiting, or if the organ is not irritable in this respect, they will pass downwards, and appetite, after an interval, longer or shorter, will be restored ; or if the aid of medicine be required at all, a puke, or the every-day remedy, consisting in a dose of magnesia and rhubarb, will in all probability leave no subject of farther complaint. It is not so, however, with one in some states of disease, such as that we have last taken notice of ; in some of these cases, from long tampered with bowels, should an individual presume to err in

this way, the stomach has often neither sufficient irritability left, to part of its own accord with what is causing the immediate uneasiness ; nor may the lower bowels do their office in assisting to remove what has been permitted to descend into them, nay, even when aided by medicine, may do it in a very imperfect way ; laxatives, in many of these cases, produce the most distressing sensations of sickness, whenever they are from necessity employed, and something like hunger, which every person expects after a certain interval, may not speedily return to one affected in this manner : This sometimes may happen, even when one so situated ventures to gratify in moderation the desire for food.

But in a person with still merely slow bowels, who is perhaps hereditarily so, who is naturally so constituted, that only a certain portion of the unconverted food passes off in this way, it ought not to be asked by his medical attendant, knowing the individual to be of this habit, it ought not to be asked, I repeat, Have you passed a day without evacuation of the bowels ? Is the alvine discharge not of a certain ordinary appearance ? But has the tendency to constipation been increasing of

late? or is it inordinate in degree? One would also endeavour to ascertain whether there were other symptoms caused, or with good reason supposed to be kept up by it, if there is any other concomitant disease the subject of surgical or medical treatment. The decision then is not very difficult; in torpor of the bowels which is becoming excessive, try the effects of regimén; if it is serious local disorder which we apprehend, wherever it may subsist, have recourse to drugs; at all events, by some measure or other, endeavour to produce a change in what is not now any longer safely to be trifled with, or perhaps has been already too long remissly treated.

The quantity of food, taken by some persons, without the usual corresponding alvine dejection, is really curious, and a circumstance well deserving physiological inquiry. We all of us know the history of cases of constipation from neglect; inattention to the natural call, allows the fecal contents to become hardened, some absorption of these taking place, or there may occur mechanical impediment to the farther passage of more recently taken food, the different parts of the tube do not now correspond in their functions, and disease fol-

lows ; in such persons the large intestines are full of fecal matter, ready to be voided, if the natural call were at first obeyed, or we shall say, were it a little encouraged : But in others, there seems a deficient formation in the tube, of what ought to be its contents, with unfortunately this additional peculiarity, that the use of any means which shall artificially and directly increase the expulsion of fecal matter, without producing another change in their functions, is so apt to leave the parts still more in need of stimuli different from the natural ones. Unluckily, from the change of circumstances, in many respects, in most cases, previous to death, as the smaller quantity of aliment taken, the different sort of it, perhaps the now ensuing of diarrhœa towards the conclusion of a lingering illness, and with a view to the farther pathology, the quick collapse, although it should be slight, of unhealthy vessels which may have been carrying more than a just supply of blood, dissection does not throw on this the light that could be wished ; at any rate, the deductions made from dissection, in any point connected with this, must, I think, be subject to some fallacy, even if we could always trace accurately the history of a

case in which it was set on foot purposely to investigate this point. This at least applies to the human body. But the inevitable inferences afforded by observing for a period the comparative quantities of what is received at the mouth and the egesta, throw a light on some points which could scarcely be more clear. The immediate change of the contents, at a particular part of the canal, to the fecal state, or the production of the fecal matter in whatever way it is accomplished, is a process in considerable obscurity; the peculiar odour can be readily accounted for, if we suppose admixture with some secretion in the large intestine, not to be found in the small guts, but there are other points connected with it not quite so clear; and even in regard to this one it is probable, from the very different degrees of feculency present in the dejections of the same person, that this secretion which we speak of as peculiar to the great guts, will very much depend on the state of those secretions, and other matters which meet it, and arrive in them from the small ones. The aqueous composition too of fecal matter, as shown by chemistry, seems curious, till we reflect on that of much of the food which is taken, and per-

haps favours its absorption in neglected cases, in so far as this exerts a pernicious influence. There are a few particulars, however, to which I would here beg attention. 1st, This aqueous nature of fecal matter is a reason why the urinal evacuation may sometimes readily supply, in a great measure, the deficiency of the other, cutaneous and pulmonary exhalation, of course, having also their effect. 2dly, Taking the same fact of the watery composition into account, the ultimately more beneficial effect of saline medicines already noticed, Harrogate waters, &c. is just what might be expected, owing to the circumstance of such, without stimulating the peristaltic motions so directly at the time, nevertheless inducing a flow of fluids from ² the intestines inwards, the reverse of which is the evil with which many have to contend. This sort of stimulus given to the small intestines perhaps more particularly, changes their own actions, and may tend to reverse those in general which do evidently not subsist in the proper proportional degree in the different parts of the canal: And does it not also seem consistent with various facts, that determination induced in this way, unless the case is a very bad one, is somehow

not so very difficultly kept up, as a change attempted to be effected in a different manner? I have seen what appeared to be scouring from the large guts, directly follow the use of a saline aperient; but, as we all know, this is not its usual effect. It may produce secretion from any part of the canal, however low, which it reaches, if not protected by the mucus or other consequence of its operation higher up.

So far as experiments on brutes can analogically promote our knowledge of the already known effects of medicines on the human species, let us observe the following results. Opening medicines, chiefly aloes, were given to a dog, and saline ones to a bitch, each day, for six successive days, with the exception of one day which was allowed to intervene before the last two doses were given. They were both then destroyed, twenty-four hours after they received the last dose.

Dog. Ileum not empty for some way near the large intestines. A little feces in the folds of the cœcum, and a little down towards the anus; but the middle part quite empty; and the whole great guts in general collapsed.

Bitch. Ileum quite empty for some way near

the large intestines, about a foot up contents present in quantity, great guts filled with feces, not hard, as if of scybalous stuff passed over, or not acted upon, but uniform, and evidently not unrecently come down.

Dog. Much frothy oily contents seemingly from the mixture of the bile, &c., in the small guts as they are opened and traced upwards.

Bitch. Her small intestines in a similar state beyond the small empty portion, the matters rather darker in colour, perhaps from some deeply tinged liquid in which I had some days before given one dose of the salts; farther up very light, but, on the whole, not differing much in this respect from the dog's, and present in fully as great quantity, except in the part already mentioned, near the great intestines.

Both. Jejunum, as according to its name, about empty, rather more so in the dog.

Some will say, What is the inference from all this? Nothing but what has been long known, viz. that aloes and drastic medicines empty the large intestines, and saline ones the small. This is very true; but I will here add something to what is granted, and make a correction on the

phrase *empty*. For, twenty-four hours having elapsed from the time the last physic was administered, and meanwhile each animal having discharged, what, had it been collected and estimated by weight, would not, as far as I can judge, have differed very much in quantity, though, from the medicines they had been taking, differing in appearance, the small intestines in the bitch were equally full of contents, if not more so, than in the dog, with this remarkable difference, that her large intestines were full of fecal matter ready to be expelled, had the abdominal muscles, in certain favouring positions, been strongly brought into action ; whereas his were almost entirely empty, so that no voluntary effort could have effected a dejection of feces ; as may be supposed, they both passed a little at the time they were killed, the bitch, however, rather more.

I do not consider that there is any thing to be objected to these inferences made from the appearances on dissection, in the circumstance of the operation of the one medicine being longer of taking place than that of the other : for if aloes is slower of operating, so as in this case to come nearer the time of death, and of course leave the large guts

at that period freer of contents, the salts, on the other hand, continued their operation more than up to the period the other seemed to have ceased; neither was the medicine altogether aloetic, though, as I have already in other words said, each dose had in it a very large proportion of this drug.

The animals were nearly of the same size, the dog, however, a little larger; they were fed together, and took with avidity what was given to them, being a due mixture of animal and vegetable food. I allowed them to eat about as much as they seemed inclined to do, yet they consumed, as far as I could contrive by encouraging the one or the other, nearly equal quantities;³ judging from the dissection merely, it would have appeared that the bitch had had rather more, but for the knowledge of the fact, as happens in man, that it was taken up, or disappeared in the course of the intestine, under some other form. In a former edition I had here expressed an opinion, that in torpid bowels, I believed the disorder may in some instances exist at a particular part of the canal, as at the commencement of the large intestines, or above, or below this point, but as often, I sus-

pected, consists in a gradual declension or falling away from proper movement, in consequence of the peculiar action of the tube at its commencement, the deficiency becoming worse in the descent, or in proportion to the approach to the lower extremity.

I wished, if possible, at the same time to have ascertained whether much of the water given with salts passes unchanged, I mean without entering any system of vessels, but merely mixing with the mucus, &c. which is thrown out. I therefore dissolved one dose of the salts used in the above experiments, in water strongly tinctured with logwood, expecting the vegetable colouring matter to pass through the bowels, pretty red: The liquid feces, however, which followed were black, some change in the astringent substance from the iron vessels I used in preparing the infusion, though not previously visible, or from matters met with in the intestines, afterwards taking place; but this much is to be observed, that, two hours and a half after the medicine was given, the urine was seen of a strong pink, and it probably was so, much sooner. This part of the experiment, therefore, cannot be said to be satisfactory, though I

think there is reason to believe the truth of what it was intended to prove.

I repeated these experiments on the dog species, on the subsequent occasions, all of them being males, and under the more fair circumstances, that after each took the last dose, from thirty to six-and-thirty hours were permitted to intervene before they were destroyed, so as to allow more time for the direct operation of either medicine being suspended. In regard to the visible deficiency of feces after the aloes, I cannot say they were in one respect so completely decisive as those I have just given above in detail; but what amounts to nearly the same is, that, though there were some feces in the great guts, the quantity passed between the period the last doses were given, and the time of death, was so trifling, as to bear no proportion to what was voided by the other, and would have made it exceedingly extraordinary indeed if some had not been found in the parts. I must also state, that, to produce any tolerable operation, I found it necessary to increase the strength of the doses as I went on, and even then with very little effect, which was by no means so much the case with the salts, when they were once brought to operate properly.

It is of no very great importance, but I may remark, that when the experiment had been two or more days in progress, almost immediately after one of the doses of salts, *i. e.* about twenty-four hours since a preceding one had been taken, some feces came away ; and what I have to notice is, that I observed that the *first* portion of it was distinctly formed and firm, as if it had occupied the large guts for some little time ; also all of what was passed twenty-four hours after the last dose, *i. e.* from after that time till death, had quite this appearance.

Experiments of this sort should be varied in being tried at all seasons of the year, in warm, cold, and temperate weather, on animals in confinement, and on those as far as possible at entire liberty with freedom to exercise, on those fed on different proportionable quantities of animal and vegetable food, longer and shorter intervals also being allowed to pass before they are killed for inspection of the parts ; for proper comparison, they should always, if possible, be conducted on two at the same time : The account of these, however, I now offer such as they are, and they will, in the meantime, serve as grounds or outlines for the fu-

ture prosecution of this object with attention to other minutiae.

Whilst we are considering the effect of two different classes of medicines, it will be necessary to advert to some remarks already made, particularly those in page 20, *et sequent.* lest I should be misunderstood in regard to such. If we are ever ultimately to improve some kinds of slowness in the bowels, by a course of ordinary laxatives, (those not saline,) that is, if we expect to leave the parts regular, after aperients are withdrawn, nothing gives a better chance of effecting our purpose, though often of difficult enforcement, than the utmost abstemiousness in the patient, as to the quantity of aliment taken during the employment of these : For the bowels being made to act at the time from the medicines, while the over-activity of certain of their functions are permitted to subside, when a more natural quantity of aliment is again had recourse to, this must in some degree stand in lieu of the other, the artificial stimulus of aperients which are now denied them. And undoubtedly, if, by this regulation of the treatment, we can remove a loading of the vessels, a morbid fulness of the vascular part of the digestive sys-

tem, which some practitioners talk of as preceding a loss of tone, it affords a most rational hope of cure.

In prosecuting facts relative to the production of the fecal matter, or to the occurrence of a proper residue of the food, and its discharge from the system, we must expect to encounter phenomena not at first sight devoid of some obscurity or difficulty, and in proof of this, I relate the following. A person who had been habitually much troubled with slowness of the bowels, had several calls to stool, without particular pain, nearly eighty-and-forty hours from the time of the operation of some medicine which had been taken : Some article of food or drink, or other causes, would have readily accounted for ordinary diarrhœa in this way ; but on each occasion the small quantity which was voided, consisted of a thin fluid without fetor, colourless as water, and mixed of course with some of the mucus of the parts, almost, or entirely free, however, of any thing like fecal matter, though the individual had not lacked his usual portion of food about the time, or since the laxative was taken. The discharge may be said to have been occasioned by something causing irritation in a part of

the intestines farther up ; but then, if this was the state of the case, there was no pain or other symptoms positively indicative of it, and one would have besides expected some matters causing it, to have been thrown off in a more distinct form, than was exhibited by any of the subsequent spontaneous and not unhealthy stools of the succeeding days. In this case I have now no doubt, that the individual on the day on which these appearances are noted, had simply lacked the ordinary abdominal evacuation, and that the discharge mentioned was one accidentally vicarious from the nasal cavity, or some other passage. The complete enjoyment of his ordinary health, the following day, leaves us little room to question it.

A well-known practitioner in the British metropolis considered that many diseases of the digestive organs commence in the large intestines, and of the first more palpable manifestation in these, there ought to be little doubt ; our view of the origin, however, in certain cases, must modify the idea we attach to this opinion. But as there are undoubtedly many individuals with what would be commonly reckoned healthy powerful stomachs

and immediately adjoining intestines, * yet with slowness of the bowels further down, these last

* I shall endeavour to condense this subject, and recapitulate under one view, some part of what appears in the text of this section. In many persons we find that a great deal is taken up by the lacteals, absorbing veins, or whatever be the agents, opening near the commencement of the canal, carried into the circulation, and removed by the urinal secretion or otherwise; less being in this way left to occupy the lower intestines, so that the complaint may have its origin, or take its rise in this very circumstance. At the same time, we ought to recollect, that in cases where the contrary sympathetic torpor propagated from a lower part inactive from want of use, does not accede, the morbid excess of absorbent action once any how induced, though not always originally caused by an improper remora or delay of substances in the parts, whose moving powers are weak, may yet be now kept up by this, according to certain physiological views becoming an action of necessity, we might say accommodation, to remove what is not taken away in the usual manner; and under this impression, one would naturally conclude, that indirectly, it will rather tend to be lessened by whatever, not allowing the contents so much time to be acted upon, and aiding the movement of the belly, removes costiveness, at least under some circumstances. As I have more than once occasion to speak of sympathetic torpor, it will be right to say a little more of how I conceive it may operate. Independent of that sort of case, where the parts, from want of sufficient power, or other causes, do not propel what they really contain, the state noticed at the commencement of this note may, as to the lower portion of the bowels, from the absence of passage through their course, become, in every respect, one of inaction, liable again to be propagated *upwards*; and though there is in such persons ordinarily no mechanical obstruction of feces, indeed the very contrary of this, the want of transmission through natural openings, the slowness with which any contents accumulate, and consequent hardness of these, may, it will readily be conceived, soon give appearances of, and in fact really produce disease in such parts as the large intestines, or for

being chiefly complained of, I would here propose the question, whether, for the sake of these, patients, when made uneasy by them, should in every instance betake themselves to a course of animal food, certainly not a very natural one, or to the use of laxatives, in this state of the body, so apt to require constant repetition? Though one should have much greater expectations of very torpid bowels, in some habits recovering their own powers from a system of flesh diet, than from a course of laxatives, and more especially of certain kinds, as we have seen, yet, if the patient's condition does not seem improved under partial relinquishments of this regimen, even where it does succeed during its trial, one would consider the propriety of having daily, or at least very frequent recourse to opening medicines. Besides other reasons, may not this use of flesh also become a habit, not al-

some way above them, even though, as we have said, it did not commence here. Where too keen a digestion exists along with temporary openness of the bowels, it may, as stated, be still more unlimited. The effects, which the inaction of either extremity, once any how induced, may have on the other, or on the whole canal, it were needless to discuss at greater length. As to the first part of this note, I remark, that I am at the same time ready to allow, that copious urinal secretion, and openness of the bowels, are by no means incompatible.

ways a very convenient one? Is there not a danger that the stomach, after long continuance, may lose the remaining power it had over vegetable aliment, or we should say rather, increase its improper method of disposing of this,—that the system may become incapable of being nourished on any thing but flesh, which does not seem a very comfortable prospect? The use of laxatives, on the other hand, whilst aiding the motions of the intestines, may, and often does in certain persons, hurt the stomach, which, in its turn, sends down its now more vitiated contents on what is below, producing cramp in the limbs, &c. I do not, however, assert, that there are not persons, who have long used laxatives without this bad effect, which, indeed, is sometimes more apt to happen at first than afterwards, whatever may be the necessity for increased doses; nor do I mean to say, even as to demand for increase of dose, that cases do not occur, where the use of the aperients may gradually have become less necessary, or at last have been entirely relinquished, and the same may be said of the animal food diet; but in regard to this use of laxatives, I speak of what will very frequently be found to be the case.

We were just now considering a very common state of disorder, where the slowness of the bowels alone is the cause of disquiet : but there exist also cases, where, with the bowels tolerably open, the stomach is weak, I might rather say imperfect ; and without being exactly in the condition of a dyspeptic person's, it is weak with regard to some ordinary substances, whether or not found to be less offended by animal ones. This state of complaint then also is to be considered with some attention to opposite evils, though in it perhaps they are of less importance.

To pursue the substance of the two preceding paragraphs, I go on to observe, that as we may, in the meantime, only be alleviating, it may be doubtful how far, with a view to ultimate recovery, we are to direct a patient with faulty digestion, to avoid every thing, which we know will slightly increase his disagreeable sensations, or whether the inability of one person, we shall suppose, to take a little of some individual substance, such as sugar, without suffering ; that of another with regard to various vegetables in general ; that of another to exist comfortably without taking more sleep than most people do, without a great deal of which, pa-

tients in certain states often feel at the time much aggravation of their suffering, I say with regard to some of these conditions, or similar ones, it may be doubtful whether the disposition will not rather be increased, by giving way to tendencies which the constitution would perhaps resist,⁴ would bear up against, and with respect to them overcome its irritability, if the attempt, except in extreme cases, were in some degree persisted in; for nature, when pushed, will in her own manner do much: or whether the parts are more likely to recover sooner their powers, and that more permanently, when the exciting causes are for a time at least never encountered. Nor can we consider the solution of such a point as this, a matter of mere fruitless curiosity, or that it would be altogether unimportant in its consequences, since it is not difficult to perceive, that a principle once established on the observation and experience of one having the requisite talents, and extensive opportunities for this purpose, would on numerous occasions influence not a little the line of practice. This much is evident, that when an individual does overcome a difficulty of this sort, he has attained a considerable point. Certainly we sometimes see a particular article of

food cease to give uneasiness, though its use has never been entirely desisted from ; whilst at other times we find a person for a considerable period discontinue some article of diet, over which, even at a more distant term, the digestion has not recovered its proper influence, though a due time may have been allowed for this purpose, as if the parts seemed naturally to point out, that such was in some way unfit for the individual.

Cases do occur where there is only one fit line of proceeding left us ; but, under the above doubts, the rule, *est modus in rebus*, probably should direct us a little in these particulars : Of sleep, it will be presently seen, I would generally prescribe a good deal in disorder of the digestive organs ; and if there is any other exception to this, it is as to fluids, exceeding abstemiousness in which on the other hand, will often do more for a person with deranged digestion, than any other means we can use ; to take no liquid at all till a considerable while has expired from that in which the meal was swallowed, not to mention discontinuance of the practice of drinking much during it, is an advice which is but too little attended to in many forms of these diseases. I have sometimes

seen the inability to receive even an ordinary quantity of fluid so palpable to the individual himself, that the evident increase of suffering had dictated to him the propriety of withholding in this particular. Some persons, with powerful digestion in other respects, cannot, without suffering, drink much liquid in the course of the twenty-four hours; and fortunately for this state, such in general do not feel much of the sensation of thirst, nor a desire to drink a great deal; but in many states of diseased digestion, the very opposite of this is the case, and they not only have a great wish for liquids, but indulge it to any extent. I consider this inability we sometimes see of satisfying an accidental thirst, by a hearty draught of mere water, without suffering unpleasant consequences, one of the strongest evidences of a tendency to some kinds of dyspeptic disease, which itself will receive more particular mention in the next section.

Even in regard to fluids, however, let us not in forming a general rule, fall into a dogma, and shut our eyes to what may sometimes be an exception. I knew of a case, in which an individual, troubled apparently with weak digestion, declared, that, after trying many things, he found

nothing answer so well with him as soups and aliment of this sort. I do not know whether he had made any very steady attempt to change himself from this state, but he probably brought it on himself, by indulging too much a taste for liquid nourishment : The stomach, however, it is evident, had assumed a peculiar action, and had been able in this person to suit itself to what is in general most carefully to be avoided, but which, in this instance, the organs having once accustomed themselves to it, might have caused more suffering by an attempt at relinquishment, than by being continued ; so strong is the influence of habit. If we suppose this a case of scirrhus pylorus, some diagnostic remarks on which will afterwards be offered, a very different view of matters may be taken, and we may then say the powers of the stomach itself were naturally great.

Except where there is diarrhœa, an analogous state of the bowels, or the person is under the effects of purgative medicine, I have sometimes thought, contrary to what one would expect, that the contents of the great intestines are really made more dry by the over-use of fluids, which, however, it will not be difficult to explain. Magendie,

speaking of liquids taken into the stomach, Vol. II. p. 125, 1817, has this passage : “ Cependant une ligature, appliquée sur le pylore, de façon qu’elles ne puissent pas pénétrer dans le duodénum, ne ralentit pas beaucoup leur disparition de la cavité de l’estomac.” Now, if in some persons, the stomach itself, independent of the small intestines, takes up much of the fluids which are put into it, these will not, of course, reach the lower part of the tube ; and, at the same time, by disordering the secretions of the upper portion of it, and exerting a prejudicial effect in different ways, it is very reasonable to suppose, that those farther down are more apt to become faulty, or deficient, which, I believe, will in reality be found to be the case. And without now entering into any such considerations as those contained in another passage from the same author, p. 381, “ Quant aux organes qui transportent les liquides de l’estomac et des intestins dans le système circulatoire, d’après ce que nous avons dit, en parlant des vaisseaux chylifères et de l’absorption des veines ; il est évident qu’il y a des veines qui absorbent directement les liquides et qui les transportent aussitôt au foie et au cœur ; en sorte que la route

qui suivent ces liquides pour arriver aux reins est beaucoup plus courte que celle qui est admise généralement c'est-a-dire les vaisseaux lymphatiques, les glands mésentériques et le canal thoracique.”—

Without inquiring at this time whether it is by passing into the liver, and deranging it in particular, or by what sort of vessels the liquids do pass ; and without investigating, in like manner, the *course* to the kidneys, organs which are indeed of the first importance, or dwelling on what has been reasonably enough assigned, unfit dilution of the gastric juices, let us rest with the fact, that in various forms of the complaints we are now considering, liquids of any sort, taken in quantity, are almost always hurtful. The inclination for them is sometimes increased antecedently to the existence of an opener state of bowels. It should also be stated, that though habitual excess in diluents is to be avoided, the reception of simple liquid into the stomach without solid food, will on some occasions produce alvine dejection.

There seems much reason to believe, that a propensity to the abuse of spirituous liquors, which is in some respects different from the disposition for liquid in general, is in many persons continu-

ed in whatever way it may have begun, from uneasy feelings, arising in some improper state of the digestive system, which sensations they seek in this way temporarily to remove; a mouthful of simple bitters, as the infusion of quassia in water, is on this account, not always ungrateful to the palate of some persons.

The universally deranged canal, in all its parts, whether altogether from the individual's own errors in diet and mode of life, in various respects, or partly from tendency to disorder in original formation, the disease being slight in degree, though diffused over some extent, I should consider, if not of too long standing, the case of all others, in which our art may certainly be of use, and chiefly by means of the alterative aperients formerly noticed, used in such doses as shall not irritate much or keep up inflammation, with after attention on the individual's own part. Strong tendency in the parts to sluggish action, or, in like manner, a disposition to disease in some particular part of the digestive system, and in some parts, rather than in others, whilst the rest is tolerably healthy, are the sort of cases which, without being immediately dangerous, are very likely

to prove untractable, and such as will require a good deal of close attention. In the melæna even, and in diseases where immense, disordered secretions are made into the alimentary canal, of the entrance of which previous to dejection by stool the persons themselves seem sometimes conscious, * as it were, though a patient's situation for a while may be very doubtful, I should not despair of a cure sometimes ultimately taking place: and accordingly such occasionally occur. Lesser forms of this, and particular varieties of dysenteric disease, improper states of the abdominal secretions, constitute many of those complaints in digestion, not accompanied by ordinary constipation, which are occurring to daily observation; yet it may be readily conceived some degree of discrimination on this point will be requisite. I am led, however to conclude, that it is rather in such conditions of the parts, when continued for a length of time and with obstinacy, that the great intestines

* Mr Abernethy's Lectures afford some very interesting remarks on this subject.

I have myself seen sudden copious *florid* hemorrhage from the intestine, terminating in death in a few hours, where a flattish sore on the inner surface giving it out, did not in extent much exceed the size of a sixpence.

become the marked seat of disease, which the after dissection so frequently exhibits. In advanced states of disease in the intestines, a chronic inflammatory process goes on, and their inner surfaces become coated with matters differing widely from what is healthy : structural derangements supervening. Vitiated mucus much resembling pus, or pus itself appears in the discharges.

Perhaps in melæna, and certainly in the less dubious cases, where blood almost unmixed is vomited from the stomach, sometimes with spasm and pain, the mouths of vessels are more likely to be permitted to close, by our employing such venesection as can be safely borne ; but the result of the practice detailed in Dr Hamilton's useful work, shows how much may be done for these merely by aperients ; and in melæna we may expect a similar benefit, on the common principle of taking away matters mechanically irritating, which may also produce a dragging where there is connection of parts, either natural or by adhesion ; whilst we thus at same time prevent distension, which causes pressure among other evils : On all these occasions, however, the great object is to keep up an open state of the bowels for some time, by small doses

of medicine, under a diet limited in *quantity* ; for it is by this method principally, as I formerly said, unhealthy vascularity of these parts, and its attendants, can be expected to be removed. The habitual use of such medicines as act chiefly on the large guts, without attention to this repressing of the appetite during their employment, is by preventing the access of some degree of, shall I call it natural prophylactic torpor in the upper part, only to augment the state of stomach which frequently constitutes disease. In the above cases, and many others, it would generally be of consequence, that food of any sort, and in any form, were not taken oftener than thrice or at most four times in the twenty-four hours, and at suitable intervals, allowing for that variation, which different cases may require in the article of fluids, and for the influence of custom in various respects as to what some would designate a dissatisfied condition of the parts, but which, in the mere wish for more food at the time, if this prevail, I consider of less moment, where I have resolved, to adopt a short course of laxatives, as it will be found to diminish from day to day.

In ordinary cases, popularly called bilious, or

“the bile,” (shall we not sometimes say, more correctly the want of it,) and at any rate, where, along with this, a strong natural tendency to the slow state of bowels has shown itself, it will always be prudent to follow up our doses of alterative medicines, by a few successive small ones of the Epsom, or some other salt, as this practice will afford the best chance of the functions of the parts returning to a healthy condition. So far, however, as the simple motion from the belly goes, it cannot be denied, that we may often have the bowels doing their duty in tolerable perfection, without the aid of medicines, where the subject is nevertheless in a general point of view, in what is justly accounted a very precarious state of health ; while, on the other hand, there are cases, where each alvine evacuation can only be obtained by physic, or artificial means, and yet these last may have about them every appearance of ordinary longevity.

Amidst debates which once obtained respecting electricity, or some other superaddition to organization, or consequence of the organization, being the principle of life, might it not at least, we ask, passed in strokes through the belly, effect a change

in some cases of torpid bowels? Since this query was formerly put, galvanism has been applied to this purpose with very decided benefit, and when other more ordinary means have failed. I originally meant here, in general torpidity of the bowels; but from the accuracy with which it can be directed on a point, electricity in any form does seem peculiarly suitable to that state of the tube dangerously distended by air or otherwise, from relaxation at some part of its course, which is believed to take place towards the conclusion of some attacks of acute disease of the intestine.

On all occasions, in choosing medically among the means of effecting an end, that surely, which shall do so with the least diminution of the natural power general or local, if not with an actual increase of strength, is, when compatible with other circumstances, and not inconsistent with true scientific indication, to be preferred; the unaided functions the rather on this account, proceeding then as we would have them.

We shall close this section with remarking, however, that where urgent danger is not present, or even sometimes where it is, and there exist different modes of treatment, conducive to the same

end, or tending to have the same particular effect, we ought to consider how far their simultaneous employment is admissible. The proper decision may be a matter of much delicacy. I shall perhaps not unaptly express my meaning more fully, by saying in familiar terms, that, independent of the risk of these in this way, sometimes becoming opposed to each other, it seems an error in judgment to press into service at one time too many of our curvative means, which might prove useful when brought forward consecutively, as circumstances demand. And even in urgent circumstances, those in which a single point is to be in the meantime attained by active interference, with the least possible delay, an over anxiety may lead to an injudicious repetition of efforts which may defeat themselves and the particular end which is in view.

SECTION III.

Dyspepsy, and particular Symptoms of Disease viewed in relation to their general Pathology, including the mention of Cases illustrative of this.

WHETHER or not we are to look so often towards the digestive organs, in our views of the origins and connections of different diseases which afflict mankind, one thing must, at any rate, be granted, that it is through them principally as a channel, we pour in the various medicaments which are indirectly to reach the different organs of the body throughout, and which may be intended to cure their various disorders. We have heard of the use of medicated airs for the lungs, but this is now seldom thought of; we often bleed, but that not quite so often as we administer drugs: it is something to be taken by the mouth, something to be swallowed which is our much more constant resource. The circumstance of this part of the

system being thus the path through which we come at the other organs, were there nothing else in the scale, will sometimes lead to a degree of derangement here : In addition to what they may suffer in this way, the digestive organs have besides, in common with the rest of the body, their own diseases ; and are exposed to frequent and constantly prevailing causes of disease, peculiar to themselves, in being the organs for the food, too often different from what it ought to be, though they are naturally made capable of enduring considerable irregularities in this respect. They are extensively subject likewise to the mutual sympathies with other organs in a state of disease, even on occasions where one finds these last primarily affected ; and they must of course bear the operation of remedies taken for diseases in themselves, which in return, to be sure, often leaves them more directly under our control. The circumstance of their being the parts to which internal medicine is more directly applied, must often still more enhance, in our estimation, the influence they have on other parts which we cannot reach, except through their medium. Such facts, however, should not be lost sight of, when we

consider the relation of these organs to other parts.

Further, if we take into consideration the functions of the skin, the functions of the lungs, in respect of good air, and their influence on the digestive system ; if we consider the effects on the body of what we call cold, we mean here the various kinds of catarrhal affection, or the effects, at particular times, of moisture too ; if we consider the curious subject of scrofula, which, I imagine, it would not be easy to define completely, ⁵ though we can in general, without much difficulty, pronounce as to its existence ; if we regard the occasional tumid, and shrunk or collapsed state of the living body, with or without change in its own temperature, which, besides the effects of muscular exertion, and opposite states of the surrounding temperature, is so much under the influence of a hearty meal, of sleep, or even a tendency to it : I say, considering some or all of these, we must agree with those who are of opinion, that did we know more exactly the state of the capillaries and ultimate nervous expansions, our indications of cure would often be much more steadily directed, and on more truly physiological principles. But

though the rationale of many processes in the animal economy, as of many other things, which would then become real knowledge, is in much obscurity, we can, when disappointed in inquiring more deeply into these, still form, from observation of results, many general rules and systems of practice, useful in the cure or relief of disease.

To proceed, I shall now state a circumstance, regarding which the experience of those who have attended to it, cannot fail to corroborate what I am to mention. It is this, that where a very important local or general malady is evidently connected with an improper state of the digestive organs, these organs themselves are not so very strikingly affected with certain symptoms; *i. e.* that where, as to them, there is any thing much more than merely the furred tongue and the improper state of the alvine discharge, or other common symptom, where there are present, in a very marked degree, a set of those distressing idiopathic ones impressing the organs themselves with peculiar sensations, and known to some by the term dyspeptic, we shall not so often observe local pain and disease of particular organs, local disease in general, in short, disease of particular

parts throughout the body. Nor does this seem extraordinary, if considered on the principle of the vicarious manifestation of disease, for though derangement of the digestive organs may be the immediate source of mischief in either case, where the organs themselves are much the seat of irritation, we need less expect to find it shewing itself in other parts of the system : It is not always want of appetite, or disease very evident to himself in this part of the system, that first reminds a gouty person of the necessity for a change in his mode of life. I do not advance this as a universal fact, from which there is no exception, for we often see an evident one, in the perturbed state of the heart, attendant on deranged digestion, in the most aggravated cases of dyspeptic disease ; but I have seen, even here, where every other symptom save this was slight, an increase of uneasiness referred by the patient to the digestive organs themselves as a seat, followed by a cessation for a time of this symptom, which, however, returned on the approach to what was the former state of the person's health. The circumstance we now notice is doubtless the very reason why deranged digestion, as a cause of other diseases, so often

escapes attention ; but on this point I shall not enlarge in the abstract. Let us attend rather to some other particulars on the subject of dyspepsy, which, from whatever cause, I consider to be a perverted state of the first processes principally, which our food ought to undergo in healthy digestion : It may be produced from a combination of circumstances, some of which, in predominance, giving character to the individual cases. From the variety of the symptoms, symptoms different both in themselves and in degree in different cases, and arising, it may be, from very opposite causes, and opposite states of the parts, we must naturally expect to find this word often used in a very vague sense ; its meaning may have even altered from that assigned to it by the original inventors of the term itself, and I have no doubt it conveys very different and imperfect meanings to different individuals perhaps even of the profession, notwithstanding our seeing it in such constant employment. Some will make use of it to denote the symptoms, either where the appetite is excessive, a continual sensation of craving in the parts, or where there exists the reverse of this, a loathing at all food, or at best what is understood by va-

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riable appetite ; its restriction to the last senses would perhaps be a correcter one ; but as indeed this sort of disorder shews itself in uneasy overcoming sensations, rather than in actual pain of a particular part, if we consider the difficulty of describing any of our sensations in general, suppose, for example, that produced by pressure on a nerve, we need not wonder at a want of precision in the application of a term, and may sometimes, for the same reason, excuse or make allowance for our patient, when we think fancy increases what he really does suffer, and which he may not be able, by words or otherwise, to convey distinctly to our perceptions.

There will be clear hypochondriacal tendency, mental impressions of various kinds, or symptoms of palpable bodily disease, in different degrees in different persons : There are persons, with much disordered digestive organs, who never think themselves in any danger, but cannot help expressing a consciousness of their unpleasant condition ; there are persons subject to no evident bodily disease in these parts, who are now and then in low spirits, after having been in the very opposite, passing to either extreme ; and persons who are of the most

cheerful disposition, when in health, are often the most despondent when a little out of it ; but that there are certain overcoming sensations attendant on peculiar deranged states of the digestive organs, different from those to be laid to the charge of fancy, ought not to be doubted. With regard to persons apparently healthy, but subject to unusual degrees of low spirits, and in whom there is often the very reverse of hypochondriacal fears about health or personal safety, amounting to absolute indifference, or more than indifference, about these, the fit each time seems to wear itself out, by attaining a greater pitch, from which it suddenly subsides : The like is the case in some other diseases. There are persons who are naturally more inclined than others, or less so, to utter complaint under what appears to be the same degree of pain or uneasiness ; and various combinations of the above different states will naturally lead us to find infinite variety in the conditions of the mind, under derangements of the digestive organs. It may also, I believe, sometimes be observed, that when the exceeding indifference, as to all external objects, occasionally attendant on certain states of disease, goes off, the approach to convalescence

will be accompanied with more of the hypochondriacal disposition, in the general increase of the person's sensibility.

Many symptoms, usually attributed to dyspeptic disease, may exist where the individual cannot, in reality, be said to be affected with it. Thus, heartburn generally stands far forward in the list. Now, though this may precede an attack of it; though it may reinsue, on this state of disease showing a tendency to wear off; though it may, and does sometimes accompany the furred tongue, and may be experienced by the strongest people occasionally, in a state of health, on taking some particular articles of food or drink, I believe it is very frequently absent in some very aggravated cases of real dyspeptic disorder; it seems to me rather to belong to a state arising in or connected with some effort of nature to ward off what is more truly disease. All of us know the cloyed state of the mouth, with perhaps foul tongue, which, in many people, succeeds excess in the use of fluids. Now, I have observed in my own person, this was much less apt to happen, when there had been a trifling degree of heartburn, after having exceeded in these. The animal food diet, as

is well known, is useful in overcoming the disposition to heartburn in some constitutions, but I have observed it produce a slight degree of it in others, where it had not before much existed ; and, in cases of slow bowels, I have generally found the flesh system taken as a remedy for these, more evidently effectual in moving them, when it acted now and then somewhat in this way. An acid may have been said to be naturally present in the stomach, before chemistry had affixed a distinct notion to the word, but very late experiments confirm this, and point out traces of more than one which are necessarily evolved in digesting. Acid sometimes exists to a very considerable extent without producing heartburn ; but that it generally proceeds from an excess of this, is evident from the present relief afforded by an alkaline remedy. That the sensation, however, is not always produced from this cause, any one may be convinced, unless in the case just to be mentioned we are to suppose, which is not so likely in the vegetable one employed, that the new acid effected a decomposition of what was already present. A gentleman, a medical man, in riding after dinner one day, was seized with violent

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headach and heartburn, which were both instantly relieved, by his being somehow induced to swallow the juice of a fresh lemon squeezed into a glass. Acetic acid taken at the time with some kinds of food which in dyspeptics by and by demand an alkali, will often in a great measure or entirely prevent the necessity for having recourse to this last. I generally prescribe the carbonates of potass and of soda in a small quantity of water, for acid in the stomach ; but when there is reason to believe it much diffused over the alimentary canal, chalk, as being less soluble and less liable to quick absorption, forms a useful addition, and has been of service when the first has failed. The occasional use of magnesia, answers very well ; the circumstances of each case determining the preference. A single dose or two of the blue pill has sometimes a remarkable effect on this symptom. Heartburn, with its accompaniments, is, in some persons, not so apt to arise from acid materials taken in this state into the stomach, as from those which, though not acid at the time, soon after undergo the alteration which produces this feeling.

On some occasions, if sickness, diarrhœa, heartburn, or some other consequence of nature's pro-

cesses to relieve herself in certain circumstances, do not take place, much more unpleasant states ensue, or at least more obstinate ones, if not in themselves so violent, and these for a time perhaps habitually, constituting many distressing sensations more annoying than the minor class of pains, and which dyspeptic persons attempt to describe, as existing in their own persons. The diet of animal food will often afford the utmost relief to persons afflicted with truly dyspeptic derangement, but any one who has particularly given his attention to these cases, will perceive there is such variety in the forms of disorder in these parts, that it will be impossible to lay down a plan from which there are no exceptions. A degree of hectic, probably from imperfect nourishment, owing to the formation of an improper chyle, is sometimes present where there is great derangement of the digestive organs: yet it is astonishing, on the other hand, how persons, with stomach complaints, keep their looks, often by no means meagre; are, at particular times, capable of enduring considerable fatigue, or, more correctly, the causes of it, and seem, to outward appearance, healthy: One may remark this occasionally in families, where,

from outward looks, the real patient, if seen at a favourable period, would be the last you would suppose to be so affected. In fact, the nourishment of the body, the disposition to deposit substance throughout, seems to depend on powers residing in its several parts themselves, as well as on the fit performance of mere digestion, which may be far from indifferent in considerable tenuity of person ; and *vice versa*. In the instance of Napoleon Bonaparte, corpulence even was demonstrated to be not incompatible with the existence of an organic affection of the stomach itself ; and in the Edin. Medical Journal for October 1832, pp. 261-2, are recorded two remarkable enough cases of obesity in the subjects of organic disease. The state of outward parts, however, I conceive may have its influence again on digestion.

Palpitation, already more than once mentioned, forms so prominent a symptom in some cases of disordered digestion, that we shall now more fully consider it. In regard to increased frequency, the pulsations will vary, but one circumstance is more determinate, that there exists a real or apparent increase of force, or partly both, in the stroke of the heart ; apparent in some measure, I

am inclined to think, at least from the want of such a degree of corresponding action in the arteries, exhibited in the state of the pulse at the wrist, and other vessels not very near the centre of circulation, as might be expected from the violence with which the heart seems to act, I imagine that the real increase of force is somehow less than to the perceptions of the patient or bystanders it seems to be, even abstracting from what may be the effects of alarm at the symptom. If we consider also the chronic form, with at intervals very threatening appearances which it sometimes assumes, where it ultimately leaves the patient without producing undoubted organic disease,* we have additional reason for attaching some belief to this opinion; unless we are to suppose the heart itself eminently gifted in some persons with a power of resisting causes of disease, which other parts of the system have been supposed to possess in pro-

* Parry, cccclviii. has a most extraordinary case, tolerably well thirty years after considerable absorption had taken place in two of the ribs. Here, where the muscle had beat so strongly against the bone, this last had been the first to give way; which I consider rather different from what happens in aneurismal pressure, the distending part there, acquiring substance from the disease. I have myself seen instances less remarkable than this, wherein, nevertheless, considerable tumefaction over the part subsided, and the patients several years afterwards, enjoyed the ordinary health of other persons.

portion to their nearness to the centre of circulation. When irregularity also is present, which, however, is by no means always the case, the pauses in the heart's beat are in some individuals perceptible to the person's self, but not productive of any very extraordinary sensation, whilst in others the dreadful feeling technically named *anxiety*, (not as applied to mind,) is experienced each time the intermission happens : and there are still others, who, during the prevalence of irregularity of the pulse, are not from sensation at all aware, that in this respect, there is any thing peculiar going on within the chest, and would perhaps require to put the finger to their wrist to ascertain it. In many persons, in the usual state of their circulation, a general throb arising from a strong diffusive influence of the heart, is felt at each stroke of it. I should not consider this quite healthy, and that diminishing the quantity of nourishment, solid and liquid, taken into the frame, would in most of these cases remove the symptom. The whole volume of the blood may be in too great quantity. There is the general, as well as locally overfilled condition of the vessels, of which it is fortunate for the individual when some uneasy feeling inti-

mates the existence, before being assailed by more important malady of any sort, suddenly occurring. The relative size of the venous and arterial systems and their respective activity may be different in different persons, predisposing to their several affections ; but I here speak rather of simple overdistension of the vessels.

As very long continued irritation, however, of this sort, or any other, which we more than once remark, in whatever way it is produced, may in the end come to be real structural disease, and frequently are we uncertain whether it is still only becoming, or has already assumed the latter, the organic and fixed state, palpitation being itself also as an insulated symptom, a most distressing one, it is a subject which demands our earnest attention. We have already noticed it as an almost idiopathic complaint, constituting the irritable heart, but it is often, as is well known, the attendant of peculiar disordered states of the digestive organs, appearing under circumstances which to many would seem most capricious. I have known it observed, for the first time in a patient, whilst the bowels were at the very period, and had for some time previous been kept sufficiently, nor yet too open by the use⁶

of medicine, which in excess will almost certainly be prejudicial ; indeed, I am perfectly convinced that medical men will not only be often disappointed in attempting to cure this by laxatives, but that even where, for other reasons, these cannot well be dispensed with, this symptom will frequently seem to be aggravated rather than improved by their employment. I knew a practitioner now dead, who, from strong conviction of what is here related, fairly set himself against any plan of the kind, in the treatment of this sort of palpitation. Palpitation, and that very obstinate, has been produced by an over-loss of blood, as well as other debilitating causes ; it will not be by depletion in this way then, that this symptom without plethora, will in reason be expected to be cured ; and in some similar cases, where there is tendency to fulness in the vessels of the head, in regard to disorders which we name nervous, those from weakness, what are owing to reaction, though bleeding does certainly sometimes produce permanent good effects where apparent debility is present, practitioners would do well to consider the doubts as to the line of practice, expressed in a note at p. 56 of Mr Abernethy's work on the Constitutional Origin, &c. 1811.

Increased action of particular parts, with perhaps diminution of it in others, at any rate bad power of recovery as to temperature in these last, or as some will say, loss of balance in the circulation, determination of blood to parts, congestion, local plethora in short without proportional concomitant general plethora as a cause, is known to be very apt to succeed what has at some former period diminished to too great an extent the general mass of blood, or otherwise injured the strength of the whole system. And when this is the case, and the symptoms proceed farther, it is easy to see that local or even general bleeding warranted by the urgency of these, though relieving at the time the complaint in the part, may yet most naturally, where a complete change does not occur, aggravate it eventually, by increasing the original evil, viz. too great a reduction of the mass of blood, or standard bodily vigour. Plethora itself on the other hand, there is every reason to believe, sometimes arises from losses of blood occasioned by accident or artificially. The particular subject, however, with which we are now engaged, affection of the heart, cannot be properly considered without entering rather more minutely into pathological

views, which, in their extensive bearings, must influence the opinions to be formed on this topic, by those who regard it similarly.

Nervousness or nervous pain, besides being a mode of speaking often in use when the nature of the disease is not obvious, I would be inclined to define, or describe rather, somewhat in the following manner. Excitability frequently tending to be lessened both by liberal aliment and muscular exertion ; whereas febrile, and what is understood by *common* inflammatory action, is increased by such means. The last may terminate in the former, and of course the same individual may at different times exhibit these different states in his person, though I am inclined to think the real nervous temperament has *in general* little of the inflammatory tendency ; so much so indeed as literally to require the distinction being made of a difference of constitution in this respect, not distinguishable by mere colour of skin or other outward appearance. Nervousness, as applied to temperament, in which mental emotion of different kinds has a more than usual effect, and the sensations claim too much attention, may or may not be present along with the state of system here de-

scribed: I think they may be often seen quite distinct, but when they meet in the same individual, we should of course expect to find an enhancement of the symptoms.

In the *Med. and Surg. Journal* for April 1827, Vol. XXVII. p. 308, I endeavoured to point out that vinous stimuli are often useful in circumstances which might seem to forbid their employment; that the renewal by diet of the wonted circulation of blood in the digestive system possessing such large vessels as it does, even at the risk of slightly increasing local impetus, is sometimes a relief to the part affected, the general circulation becoming more diffused and equalized; that in regard to strong liquors taken within bounds,* though sometimes totally inadmissible, that which blunts the sensations to irritability in a part, will be useful in some kinds of inflammation, which are soothed, and constitutional reaction from pain prevented. Spasm or pain unchecked in a part, I believe, may pass to inflammation.

The concluding part of the history of the first

* I am rather of opinion that the daily employment of such stimuli does not increase the tendency to common inflammatory action and formation of fibrin in the blood: I consider there is less full health and natural vigour in the system, when used daily.

of the following cases, shows similarly the effect of other means which must be considered as opposed to what is antiphlogistic.

A young man, about the age of 21, was seized with pain in the bowels, accompanied with nausea and sinking, which had continued for twelve hours, but had increased greatly when I was summoned to him. He had been slightly constipated, though not to any extent, having had a motion within thirty hours or some such period; and in the uncertainty at first as to the state of the case, whether colic or not, an emollient glyster was directed to be employed. This was only in part returned, but in the course of some hours the pulse rose to a full bound, the opposite of which is often taught to be looked for, and the pain was more fixed in one part of the belly to the right of the navel, but rather farther down. He now enjoyed the benefit of the advice of another practitioner, and a copious bleeding was decided on. This in smaller quantity I repeated at the distance of twelve hours; leeches also, and when the fomentation was over, cloths wetted with cold vinegar and water were had recourse to. Whilst the disease was at its height, there was considerable difficulty in procur-

ing a moderate discharge from the bowels, they requiring a good deal of medicine to produce removal of their contents, which proved to be scanty; but the above means and repeated injections, both stimulant and of simple tepid water, which soothed the parts on any return of pain, ultimately cut short the disease. Now, however, comes to be mentioned the circumstance on account of which the case is here brought forward. About ten days or more after we had ceased visiting him regularly, I received a message to see this patient, as he had felt some tenderness and return of pain confined to the part which had been more particularly the seat of disorder. His hands, though not so cold as to excite remark, had he not been complaining, seemed yet to me not of a warmth which might have been expected in a comfortable room; and the weather was damp, tending to throw the blood from the surface. I spoke of leeches, but observed at the same time, that I thought it probable that without having recourse to these, a little exercise on foot, so as to make his blood circulate, would carry off the uneasiness. This last, he very soon put in practice with great benefit, feeling after it much more comfortable than when sedentary. He

ventured out a little on horseback occasionally, and got eventually as well as ever ; but for some little time, when he remained a day without exercise he felt the uneasiness, which could not here be attributed to mere air in the bowels, as it often may, they being duly attended to with medicine, and the uneasiness never seeming to be affected by any change of place in their contents. Instances of local congestion or pain in other parts relieved thus by exercise may often be seen.

Cases of disposition to pulmonary disorder which have improved under what is not accounted the regular treatment, and a better diet, as does occasionally happen, may be considered in relation to what is here stated. That which is threatened, is not permitted to settle itself in the part.

Another patient, a female, who had circumscribed pain, almost in the same spot as the above, continued after the severity of the disorder was subdued by venesection and leeches, in a very weak state for some time. An accumulation of feculent matter at one part, which was only slowly dislodged, requiring purgatives for many days, and producing at first, symptoms which seemed

to be rapidly passing into inflammation, was to all appearance the cause of the disease in this last case. The stools, &c. gave no indication of that in the other. The female, when getting better, but while still very weak, had a severe attack of pain and swelling in one limb, which yielded to leeches, after which her recovery was complete.

A case of more distinct inflammatory diathesis with the chief local uneasiness, however, about the same situation over the cœcum, and in which large and repeated general bleedings, exhibiting much buffy coat, were at first employed, proceeded favourably enough under occasional leeching, which was pretty frequently repeated in the after-treatment.

I should suppose it not common, but from what I have observed I am inclined to consider, that symptoms apparently erratic as to the parts affected for twenty-four hours, and though severe from the beginning of the attack, will sometimes terminate in acute disease, concentrated in one part, even in constitutions not gouty.

I have by what is here adduced, *together* with the cases in the Journal, endeavoured to direct attention to local manifestation of various kinds and

in different situations, with its capability of removal in opposite ways, nor can we pronounce that the heart itself, similarly composed of vessels and nerves, must not be amenable to similar laws, allowing for such modification of these as its peculiar functions imply ; in fact, we do find that it may be tranquillized in very different manners, antiphlogistic, or sometimes the reverse, the use of stimulant means, and in circumstances according to my knowledge quite contrary to what one might expect ; the exciting it at all, or the chance of this requiring, as would have been supposed, to be carefully avoided. I have known increased action of this part become quiet under a diet chiefly composed of rice and no vinous stimuli : and I have seen it on the other hand also improve under a much freer use of wine than the individual formerly indulged in, though there was even a degree of external swelling at a part of the walls of the chest, once present. The quantity of solid food was moderate. I have kept sight of a case of the sort for years. In the instance of a young medical man Mr B., considered by himself, as well as some of those he had consulted, to have an organic affection of this part, a few glasses of wine,

I was informed by himself, used rather to alleviate his symptoms. I rather think Sir Astley Cooper was among those he consulted as to the existence of the complaint ; but I have heard nothing of this patient for a considerable time.

A very extraordinary operation of injecting air into the pericardium practised not without success on a few occasions in this city, shows that the heart can even be compressed with safety and benefit, as other parts of the body to which we can directly apply a bandage. A few days before the second edition of this work appeared, I saw the patient who had both the merit or fortune to invent, and, prompted by the severity of his sufferings, the boldness first to execute such an experiment on himself. The disease was accounted hypertrophy of the organ ; but whatever was its nature, he enjoyed a comfort he was a stranger to two years before, when he first made the trial, which he several times repeated with alleviation of the most distressing symptoms each time. It does not appear to me that his own account of what led to the first attempt, afforded material for the inference of its probable success, but the fact itself, however the expedient was fallen upon, is as now stat-

ed. Equable compression doubtless is the rationale: but if I understood him, this was not what led to the first experiment. Such a fact as this, however, with Harvey's experiment, and the history of some cases of severe wounds of the organ, show that it is not itself so exquisitely sensible,⁷ as one might be apt to suppose. Indeed, when its peculiar functions are reflected on, its particular exposure to what would be expected to be injurious causes, the structure which confers on it such immunity from disease even as we find, seems most extraordinary.

Farther, in persons subject to the state constituting palpitation, a circumstance worthy of remark, yet not very inexplicable, is, that it is much more apt to occur at a time when individuals incline spontaneously, more than is customary to them, to an open state of bowels: Are we to say, that the same cause, whether general or local, which makes the bowels pour forth their secretions in greater quantity than is usually necessary for the person, is producing at the same time increase of action in other parts of the system throughout, circulating as well as others? or are we to say the increased motion of the heart in particular on

these occasions, follows directly by sympathy from the over-acting bowels, whatever may be stimulating them to unusual action, as cause and effect, not at once produced by one simultaneous cause, that is at once inciting them, and at the same time the heart? Either of these, I apprehend, may be the case. A set of nerves, in some part of the bowels, or in some part of the digestive system at large, may not be capable of bearing either spontaneous natural excitation, that is from ordinary accidental circumstances, nor yet that of laxative medicine, without the above consequence, I mean the heart participating in it. It is altogether a very interesting subject of inquiry.

Dr Parry's view that some kinds of palpitation, differing from his remarkable case of it in the heart itself, are owing to unusual impetus in the large vessels of the digestive system, I had not sufficiently attended to when I first directed my thoughts to this subject several years ago ; nor as distinct from aortic pulsation do I think it is now sufficiently adverted to in prognoses, but it accords well with what we set out with, viz. that the heart itself often does not undergo quite such an increase of action as it appears to do ; and in

cases where we can be tolerably certain of the accuracy of this notion, in deciding on which auscultation now will so powerfully assist us, there is much comfort to afford to mental solicitude. It is of course very different in different cases ; and a freer circulation in the great vessels of the digestive organs may sometimes, as was said, be what we wish to produce : Where the pulse feels full on an empty stomach, as I have perceived it in many patients not affected with inflammation, it is not unusual to find it become smaller after a meal, even when we might have hesitated about permitting this to be taken.⁸ A different distribution of the existing supply of blood in the several parts of these themselves, will probably also modify some symptoms. Whether or not it is to be partly attributed to this, I may mention that in slighter hemorrhoidal ailment, when the patient had been previously fasting, I have known a very small morsel of food swallowed and digestion commencing, relieve the uneasiness for a time. If it does happen partly in this way, the fact bears immediately on the subject.

Of cases where flatulence itself claims much of our notice, I have to say that I knew an indivi-

dual a good deal afflicted with complaints in digestion, and now deceased, in whom the passage of a mere thimbleful of air, as he used to describe it, upwards from the stomach, used to relieve the feeling of palpitation, in a manner that made it quite impossible to conceive it to be any thing like mechanical distension of the stomach or bowels in his case ; he used to have the sensation very much in the digestion of the last portions of the former food, before eating again. Patients sometimes feel themselves as singularly relieved, when even a very small quantity passes in like manner per anum, in some degree also, when a little air shifts from one part of the bowels to another ; at any rate, supposing the mere mechanical distension of flatulence a very inadequate cause for the symptom, which, I am of opinion it is, as we often see it to a much greater extent, without this effect in a proportional manner or at all, the occasionally concomitant increased action of the bowels above noticed, is generally connected with the extrication of more than the usual quantity of some kind of air into the course of the tube. When I say an inadequate cause, we may as well consider how far it may however operate in this

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respect and have only this to remark, that no doubt air collected near the pit of the stomach, either in the stomach itself, or in some part of the colon, in certain makes of chest and neighbouring region, the formation of the body probably varying a little here, may, by pressing near the heart, influence its motions, besides rendering these, whether moderate or not, from continuity more distinctly perceptible. Headach likewise will often immediately cease, on a little air coming up from the stomach.

In the same individual its situation in the canal will sometimes alternate, the flatulent feeling existing for several days together, chiefly about the stomach, while at other times it prevails almost entirely in the large intestines ; and in either case, where its presence or absence in being retained or expelled, affects other parts, as the head or heart, particularly where for a considerable period it has been found to do so, it certainly argues that the functions of some part of the tube, are incorrect, that, unless what air is disengaged has very unusual powers, some part of the canal has become irritable beyond what is natural, though from too much,—from a morbid sensibility in ano-

ther situation, the more obvious mark of disease is transferred to that. Some facts relative to flatulence and to heartburn, will be mentioned in another place with less interruption to present subjects of consideration.

In a case with a slight anasarca tendency, where even, though sudden death took place, and the dissection exhibited water in the pericardium as the only apparent immediate cause of it, the head and belly being both also inspected, the passage of air per anum used to relieve very much the distressing feelings about the heart. Dr Abercrombie saw this patient at one time. I formerly spoke of the flesh diet in mere irritable heart; in palpitation symptomatic of certain disorders in digestion its efficacy is very great; and even in the last mentioned dropsical case, many of the symptoms, it is curious, were relieved by it.

The antispasmodic medicines I cannot say much about, but the blue pill in moderation, is in some persons, now and then of much service: The foxglove and similar drugs may improve the palpitation, but for the sake of the stomach, in *these* cases, they are not in other respects generally advisable. The issue or seton after a time ought

not to be neglected, where an irritable state of the heart prevails much, and has resisted other means ; local derangement of various kinds seems sometimes to be continued by custom, a part having once taken on a particular state, when perhaps the cause originally producing it is removed : but in regard to artificial disease of this sort, in its influence I believe it will seldom be found so decided as the spontaneous local disorder of a sore, or other vicarious complaint arising naturally ; and it may unfortunately happen, that that by which we intend to counter-irritate simply, confined to a part, shall at first entail participation of the whole body or original situation, really producing an increase of disease.* And the cure of any part, by determining to the bowels by medicine itself, in irritable patients, must be sometimes viewed in this way.

Whatever be the state of the symptom in question, previous to actual trial, it is very often difficult to pronounce what is to succeed : Mr Abernethy publicly relates a case, where the substitution of milk instead of warm tea in the morning

* In gonorrhœa followed by hernia humoralis, though on the appearance of the latter, the first is generally suspended or removed ; still in some instances it is aggravated.

for breakfast, produced a complete cessation of perturbed motion of the heart, which existed to a degree that, as he thought, argued real disease of the organ, but I know milk does not always agree in regard to this very particular. Besides applying direct warmth to any extremity which is cold, which is in general of the greatest consequence on occasions of local determination, I have sometimes thought that something cool applied near the region of the heart, if this could be done with safety, the head⁹ also not being kept too warm, might, from the sedative effects of the chill produced, tend now and then to relieve palpitation when violent, and I have prescribed it for this purpose. Dr Parry of Bath, in his work on pathology, No. CXX. mentions pressure on the carotids, as a means of diminishing the heart's action at the time, but seems to me to mistake the reason how it has this effect.

Of all articles which are in common use, I do not believe there is any which has a more directly hurtful influence on this particular symptom, whether it is attended with others or not, than some of the class of fermented liquors, on which account I am induced to specify them; these ap-

pearing to act peculiarly in communicating a putting disposition to the heart and arteries of perhaps most persons, independently of the alcohol they contain, which in any form we need hardly say at first generally hurries the circulation. Some persons may experience flatulence from them, but the particular effect here noticed, and not attended to in health, is different from that ; it is also not merely transient. Our different beers in general tend to produce sleep, but in proof of their peculiar influence on some constitutions, there are persons who, though the disposition to it may come readily on, never enjoy this profoundly after using these as a beverage, pleasant and seemingly wholesome as they are to many.

There are many respects in which malt liquors do not suit the constitutions of persons subject to derangement of the digestive organs. The bitter of porter sometimes counterbalances, or even more than does so, what might be its prejudicial influence, but at other times it does not agree better than the others : I know an instance where its use is almost always followed by violent headach, not perhaps soon after drinking it, but almost uniformly the succeeding day. As on the other hand

I know an individual who scarcely ever takes wine or strong drink of any kind, but in whom abstinence from tea in the evening, is almost invariably followed by headach the next forenoon, not at the time as oftener happens. Idiosyncrasies, as well as various shapes of anomalous diseases, are countless in point of variety, but the disposition to suffer more or less from the use of malt liquors, is so very common with persons otherwise free from complaint, and we so often in the ordinary intercourse of life, may observe these for this reason voluntarily abstained from, that it scarcely can be accounted peculiarity of constitution. Malt liquors often affect the nervous system unfavourably, or in some mode increase irritability when there is no traceable symptom whatever of their disagreeing with the stomach and bowels ; in other persons the bad effect on these parts themselves is obvious and more or less direct.

SECTION IV.

PART I.

Various Circumstances which demand notice.

WE shall now bring together some circumstances, which, if thought unimportant in themselves, may at least promote inquiry in regard to others of more seeming consequence, and be in a measure introductory to these.

Though there are some of our beverages in common use, which rather tend to open the body, and others to which we are apt to attribute rather the opposite effect, yet there is reason to suspect that some of them, when taken at the same time, though both of a similar nature, that is, both astringent or both opening, have in this way their effects changed; so much will depend on what other articles each shall meet with in digestion. Of the separate effects of such, I may observe, that I know an individual with the odd peculiarity of being certainly purged by drinking port wine, so

different from its usual consequences. I know another, in whom the most powerful medicines are generally long of operating, but who seldom takes simply a little hot coffee, as it is usually drank, without alvine evacuation succeeding in the course of half an hour or sooner: This person is extremely averse to tea, so warm as it is taken by most persons, and attributes the effects of coffee, here mentioned, to its being taken in the warm state: If this idea be correct, we need not be so much surprised at the effect produced: This, however, may not be the case, as it is somewhat extraordinary that many things, not directly medicinal, when they do act on the bowels in some peculiar constitutions, operate more rapidly than our most active purges. There is a very strong man of my acquaintance, who scarce ever fails of being purged by a glass of hard ale in fifteen minutes from the time it is taken: Copaiva and castor oil, though both real drugs, are not violently active, yet there are certain persons in whom these will pass through the bowels in an incredibly short period.

There is an individual, who, if he dine an hour sooner than what is customary to him, has general-

ly an unusual call to the water-closet soon after : There are persons, not being in the habit of remaining at home the whole evening, who, if they occasionally do so, without pursuing their ordinary occupations from home, generally find this occur at a period not customary to them, and more early ; so much difference will a little change of scene and the removal of all care from the mind, sometimes effect. Slight change in the kind of diet, we all know, has considerable influence on the bowels, but change of any sort has often observable effects : There is an instance of an individual in this city, from necessary attention to business, rather more sedentary than perhaps he ought to be, who, though tolerably regular in his bowels during the week, generally becomes bound on walking a distance of from two to three miles out of town, where he remains a couple of days in the end of the week. Is this the effect of unaccustomed fatigue in the walk from town, an over increase of perspiration determining fluids from the bowels to the skin, some peculiarity in the water of the place, or how are we to explain it ? For we find other persons, inclining, however, to be constipated, who experience the reverse of this, and though

made to perspire and become heated more than usual, by exercise and otherwise, have in consequence of it, secretion into the bowels, and alvine evacuation : so that, in these respects, we may look for the most opposite effects to follow a similar cause, according to the particular state the parts may be in at the time, or to circumstances we cannot possibly foresee. Lounging and entire rest are now and then, I am convinced, favourable to the discharge from the bowels, in some persons who tend to a slow state of them : An effect to be ascribed, the followers of Dr Cullen's doctrine of spasm would say, to the resolution of this spasm ; to the relaxation of a too rigid state of the fibre ; as they would, on the other hand, say, exercise opens the bowels when it has this effect, by giving tone, by bracing, on occasions, where this is wanting. And there can be little doubt, that alvine evacuation, produced in this latter way, rather than in the other, is what the medical attendant would in general prefer, if the case happily assume this turn. Exercise itself, however, kept up till considerable fatigue and lassitude come on, may, in some degree, be said to operate, by producing a temporary relaxation, in some states of the parts,

favourable to the discharge from them. Some persons always consider themselves in better health when inclining a little to constipation: not that this state is by any means, in itself a proof of health, but that in such persons, bracing of the whole system, as we say, generally takes this along with it.

Our common notions of what is meant by astringent or the reverse, as applied to the digestive organs, are on many occasions exceedingly vague. Thus senna, one of our most decided purgatives, tried by the ordinary test of a vegetable astringent, will be found to strike a strong black by admixture with iron: and fluids such as brandy, which are generally accounted astringent, being indeed so to many, sometimes produce alvine evacuation; a glass of cold brandy and water, in this manner, before going to bed, in certain relaxed states, gives tone, as we say, and enables the bowels to press on their contents; at times, however, this desired effect does not follow, and the brown tongue will be then anything but improved by such a prescription. But on the above principle, it is now the practice of some to use, for the white state of the tongue which succeeds a

course of aperient medicines, some slight doses of anodynes, which, on such occasions as this, instead of binding, have the opposite effect. This, however, must be viewed in relation to what was endeavoured to be established in Section II. and attributed to an astringing power exerted on the mouths of lacteals situated pretty far up, when at the same time a proportional sedative influence, or any other power which may produce disorder by retarding peristaltic motion, is not in excess : As we would, on the other hand, explain the hurtful influence of such articles as are of a different nature, if not sufficiently so, as to act in some degree on the whole tube to its very lower extremity, possessing an opening quality on whatever this may depend, of sufficient power to ensure an aperient effect, and moderately pervade every part of it. Vinous or alcoholic stimuli in general, I believe, will be found from their influence in various respects to favour the discharge by the bowels. Even in noted drunkards, or at least persons who make by much too free a use of spirituous liquors, I have seen the bowels continue naturally, I mean without medicine, pretty free, although any degree of what could be called appetite for

food, had for a considerable time, as may be supposed, left them.

The bread and water diet, to which prisoners in work-houses and places of correction are sometimes restricted, by way of adding to the punishment of confinement, has very often the effect of producing either looseness, or the very reverse of it, constipation of the bowels. As to the effects of real medicines, how often are we uncertain of the way in which they shall act? whether by stool, the skin, the kidney, all of these ways, or by some of them more particularly? The quantity of a purgative, required in some peculiar constitutions, large or small, in either extreme, the time it will take of evidently influencing the parts, the violence with which a very small additional quantity of a drug will sometimes act, which, without this, would have lain quite dormant, all of these involve similar uncertainties. There are persons inclined to constipation, in whom the more powerful cathartics, the saline ones too, in general so quick, as well as others, take twenty-four hours in operating, but at the end of that period, without repetition of the dose, come to act with considerable force, and that, on some occasions, for

an undue continuance ; of course, we may generally expect that a purgative, which does not operate within the usual period, will not have any sensible effect at all. There are those, by nature, habitually inclined to be constipated, who are yet moved by a very small quantity of actual physic, persons, in whom the parts are all but right, as it were, and in whom the slightest increase of power, or difference in the state of the organs, would enable them to dispense with laxative medicine, but which, in their present state, they cannot do without, notwithstanding every attention and wish to effect this alteration. There are those again, not naturally of this habit, who do yet require a very strong dose to move them, if they accidentally become in need of it ; when such are at a time constipated, one may say there must be some greater cause for it, as it is so little their constitution ; of course the interference of a more powerful remedy, it is reasonable to suppose will be necessary. Of the former, when so easily acted upon, though habitually inclined to be bound, it may be said, there is in them too nice an adjustment of the functions of the parts, too just a balance, that they are too apt to fall this way or that,

to which ever they happen to rather incline at the time, and continue so, when once turned to one side or other, according to trifling circumstances. This, perhaps, is often the real situation of what we call weak or irritable bowels, of those who are much subject to be continually either in a lax or opposite state, which is the condition of many individuals ; it was that of one who lived in vigour to a great age. Extremes meet, as it is said, or apparent contrasts are sometimes more nearly allied than a first glance would lead one to suppose, and I am the more confirmed in this view of the state of the bowels in some persons, from the following circumstance, which occurred in one by no means of this habit. A strong country man applied to me for advice, regarding a trifling local complaint ; observe, not such as to confine him to the house : His bowels were perfectly regular, but I thought it as well to prescribe some aperient medicine, as I did not conceive it to be of such importance as to require more active constitutional measures, and that this would tend to expedite the cure : To my surprise, however, some pretty sharp doses of medicines did not produce in the alvine discharge, any such effects as we usually observe

from physic, yet all the while he had daily evacuation in his bowels, as usual to him. Instances such as this last are doubtless by no means singular or novel, and I bring it forward merely to elucidate what I have just said on this subject. Further, as to the bowels having once fallen into one state or another for the time being, I remark, that when an opiate is to be used on any occasion, while we are desirous of avoiding constipation, it will be found useful to prevent the sedative influence on the bowels, by anticipating this, in giving some mild aperient pill *along* with the narcotic, instead of waiting till the next day, when a much larger dose becomes necessary, the parts being once permitted to take on for the time the state we would wish to be avoided.

We mention here the following particular regarding the effects of a single laxative. When we administer a solitary dose, I have observed that there are persons in whom we may expect to make a much more complete, though of course it may not be so speedy, an evacuation of the contents of the bowels, by such a quantity of medicine as would be accounted a proper ordinary dose, than by a much larger one : That is, when the

more ordinary dose has operated according to usual expectation, and has not passed off by the kidneys, &c. increasing what is wrong. I have remarked this in regard to some of the pills of the pharmacopœias, and though I do not by any means intend to say, it is what we are always to expect, nor that we would be so apt to produce pernicious over-purging by a moderate, as an immoderate dose, if I am not mistaken in the occasional fact, I would explain it when it does happen, by attributing it to the very circumstance, of the medicine in the one case remaining longer in the bowels, and having greater opportunity of exciting the parts ; I think facts taken from other subjects might be brought forward to confirm this opinion.

We a little ago touched on the effects of change : Regarding many disorders of the digestive organs as well as others, I observe that a plan which at first would really have done good, being had recourse to, only at the end of a long train of others, may, when it does come to be tried, fail in effect, may not now be the proper one, may perhaps even do harm ; or, on the contrary, though now useful in some new state of the body, under former circumstances might not have been so : at first perse-

verance in one particular plan may be right, afterwards frequent changes in this plan, or a part of it may be necessary : what at the commencement of its trial may seem to be doing harm, may in fact be restoring to health, or *vice versa*, what at the very first seems to do good, may in reality be detrimental, giving rise to various fallacious opinions in the patient and others. As to diet, exercise, and otherwise, it is not difficult to conceive that change from day to day, even differs from that from week to week ; particular food or drink which we are not in the daily habit of using, is more likely to produce a wholesome discharge by the bowels, and affect the digestive system in this way, when it meets with it thus more seldom. One thing, however, is evident, that to most persons a little change of diet, with other things, is useful now and then ; that our organs are suited to this ; that were they not so, we should not be so well adapted for many of the common purposes of life. This same adaptation, however, in the machine, to certain degrees of irregularity, is a strong reason why the body is so often exposed to more than just degrees of it, before an individual perceives that there is any aberration from the healthy standard, before a per-

son is aware that some morbid change has been induced, which earlier attention might have been better able to remove, though even now perhaps not beyond the chance of amendment: Thus persons in general, often do not think of slight degrees of bad health, till it be somewhat more confirmed.

Another fact is pretty obvious, that in cases where we hope to effect a cure, whatever may have been the patient's habits about the time, or for some while previous to that of his becoming unwell, in respect to his general course of life, or his diet in particular, either as to the kind of it, the periods at which it was taken, or other circumstances, we shall often be correct in directing some alteration with regard to these, though they may not have been what would usually be accounted irregular. Change of place, of abode too, as a residence in a country having somewhat of a different latitude, produces considerable effects on the digestive system, sometimes beneficial, sometimes the reverse of these.

Changing the sort of laxative medicine a patient has been employing, will frequently be found to make a much smaller quantity answer the purpose.

SECTION IV.

PART II.

Various Circumstances which demand notice.

THE opposite notions entertained both by those of the profession and others, of what is supposed to be light food, or the reverse of this, strong, heavy, or rich, as we say, deserve some attention. If we mean by light food, food of easy or not troublesome digestion, it will very often be of that kind generally reckoned heavy, viz. flesh and most animal substances, that is, food from a small quantity of which the digestive organs can, with little labour to themselves, extract a great deal of nourishment. Most people, however, would be a little astonished to hear such an article as fat bacon recommended as light food for some delicate stomachs; yet among the vulgar, on whom experience might now and then be expected to operate, this, in some countries, taken previous to all other

food in the morning, is a favourite remedy. That it is not altogether a fanciful notion, I am convinced ; for I know there are many individuals with peculiar stomachs, who, though annoyed by many ordinary articles of food, seldom feel any disturbance from such as we now mention : but we may explain the circumstance with respect to the bacon, thus ; in the first place, the above remedy is taken by working people on going early out in the morning, and many persons require food of some kind, for the organs to act upon, before doing so, in which case a piece of bread might serve equally well ; secondly, a little of such food, as we now speak of, independently of its being animal or any thing of this sort, in the case of persons who continually much overload their stomachs, may, by cloying the appetite with a little food taken previously, prevent their making too full a meal at the regular period for that, in other words, acting as a check on inordinate or false appetite, when this, instead of the want of it, is present.

I consider that the ordinary idea of what is light, whatever be the ailment, is not always what is in reality more easily digested, but what the inclination does not revolt at ; nature, this very inclina-

tion, may indeed sometimes be directing more fitly, than we under any preconceived opinion can possibly do, either when we in the one case thwart the taste by prescribing what does not at all suit it, or in the other over-encourage it, producing increase of relish, not always to be desired in certain states of the parts; for either of these may perhaps have their influence, from differences in the quantity of saliva thrown into the mouth, if any importance is to be attached to this secretion, or other secretions which may be modified in a similar manner: but there can be little doubt that it is in this way of directing what is less loathed at, that we often use the phrase *light*, as applied to white meats, such as fowl and veal, rather than to the redder fibre, a trial of which, in different cases must convince any one, that it is in general of the quicker digestion, Pork, however, though a white flesh, has by some been accounted *light* in this sense, and recent experiments confirm the notion that it does not remain long in the stomach.

What is *light* in an antiphlogistic view is, of course, usually very different.

I may also observe, that there are some popular

internal remedies, which need not however be specified, as every one may supply some instance for himself, remedies which are used on various occasions for different local ailments, not of course of a very serious nature, in a manner that must appear very absurd to persons of our profession. I have sometimes thought that their success, if ever justly attributed to them, was partly to be explained in this way, that where the complaint is a little of an inflammatory nature, such potations, or what shall we call them, by producing a temporary trifling derangement of the digestive system, occasion some degree of nausea, tending at first as usual to diminish vascular action in the other parts of the body. There is in this way also at the same time, probably encouraged, that state of the whole system which is favourable to expectoration, in so far as this may tend to shorten the first stages of inflammation, and which admits of less doubt, if the chest itself is complained of. This of course is under a very different state of the body, from that in which local affection improves by the removal of nausea.

Further, in regard to disease in the digestive system itself, every person, though in perfect

health, may find some individual substance or substances, animal or vegetable, which either from their original composition, or the manner in which they are prepared, do not suit their digestion, disposing even other articles taken along with them, more or less, to an improper state, and such as these are more truly what we should reckon heavy. As to the idea of simple unmixed food being always of more easy digestion, there are persons of reputation in our profession, who have their doubts on this point, and contend that a meal of very mixed materials, provided the whole does not exceed in quantity, is by no means always of difficult digestion, the somewhat heterogeneous articles undergoing it consecutively as might be wished; but this, if true, with respect to some persons, may of course not be so with regard to others, and even very different in them. I have heard it distinctly stated by a very athletic man, and one not only likely to be whimsical in such a matter, that whenever he eats salmon, without the common addition of butter in considerable quantity, it invariably disagrees with him, throwing out a rash on the skin.

Besides the effect of mixing food of the same

kind, as of different sorts of animal or different sorts of vegetable substances, it has been well said, that food entirely animal, or entirely vegetable, may act very differently from what each would in a mixture of both, unless the quantity of the one or other which is superadded is extremely small, so that we cannot always pronounce on a partial abstinence from the one or the other. This notion is sufficiently confirmed by what I have observed, to make me much persuaded of its correctness, and a different enunciation of the proposition will explain itself. Vegetable food cannot, in one respect, be said to stimulate so much as animal ; on the other hand, as it is well known that vegetables, even in no great quantity, will afford materials for flatulence, we may perceive that in this latter manner, some persons shall be very easily affected, though not readily influenced in the other ; and *vice versa* : so that it will very much depend on the kind of susceptibility present, When the system is very easily affected, whichever of the two is employed, we may then, under the guidance of particular circumstances, be compelled to temporize merely.

On the subject of different articles of diet, which

in being abstained from, or used, are supposed to influence the parts, I remark, that between plethoric, or it may be other affection of the nervous system, not amounting to a very great degree, and disorder of digestion, there is certainly at present not sufficient distinction maintained. An individual, for example, eats too much, or has drank to intoxication, and he is said to have put the stomach out of order. Now the fact is, the digestion may on such an occasion have suffered, and happily in general, this nausea is nature's index for limiting further hurtful indulgence at the time, independently of the will; but frequently, on the other hand, the alimentary canal is in great power, and without itself suffering much at first, if at all, continues to throw in a quantity of chyle or blood, which is oppressing particular parts, or the nervous system and whole frame. Occasionally there is in this respect such a want of balance, if we may so speak, (not as commonly applied to the circulation itself in different parts,) that the nervous system and whole body requires nourishment and stimulus, which a weak digestion cannot receive material in sufficient quantity to bestow; but oftener do the digestive organs take

greedily, what the other does not require, of course there is then present plethora in various modifications. Idiopathic affection of the nervous system, from its reigning influence over the whole frame, can hardly be expected to be found long simple, if it exist to a great degree, and digestion itself being so much connected with every other function, it is very natural for us to confound them, but still they must be seen to be distinct, and the distribution of our remedies according to the tendencies of the case be made with a view to this.

SECTION V.

Comparison of Facts relative to Functional and Structural Disorder.

RESTORATION to health, or what the individuals would call health, may sometimes, as is well known, consist in the re-establishment of new processes set up in the machine, which in themselves are not strictly healthy, but which may have been all along necessary to answer some original imperfection of the system, or may now only have become necessary to suit some morbid change subsequently produced in it, and under such circumstances as these, insure a certain degree of health. Of this nature is the renewal of discharges, counter-irritation, or any vicarious disease which has become essential to the system. Individuals occasionally complain of the annoyance of an over-secretion of urine, but in peculiar states of the digestive organs, it is astonishing how much appetite and other circumstances are connected with

this; couple it with the variations in the furredness of the tongue, observe some of the phenomena of mal-digestion in regard to liquids, and the greater liberty with which these may be indulged in, at some times than at others, and we shall have much reason for attaching importance to this subject. The pathology of diabetic disorder, the renewal of temporarily suppressed, or rather diminished secretion of urine, by means of some sort of purges, the greater copiousness of it when the stomach is active, its turbidness and scanty production in diseased states of the liver, all show the intimate connection * between the whole urinal

* See some very interesting observations on this subject contained in the concluding remarks to a paper on the proximate principles of the urine.—Med. Chir. Tran. Vol. VIII. p. 542, *et seq.*

After writing the above passages and others, see p. 91, I found in the writings of Dr Rollo, that acidity in the stomach is in fact generally to be looked upon as a proof of increased actions in it, nor is this more than the recent experiments on healthy digestion would lead one to expect; but, at the same time, we must be on our guard against a disposition to the immoderate flow of urine, and that, in rarer circumstances passing into real diabetes. The animal food diet, or more accurately, the absence of vegetable matter, is always supposed to moderate this, but in a case not diabetic, on the day succeeding that on which the proportional quantity of vegetable food had been much more than on the preceding, I have seen the urine rather less in quantity, without any such *observable* change of weather (east wind in some situations, or variation from dry sunshine to moisture, &c. have their effects) as to account for it; in this case, however, where the bowels were slow, and the constipated state had been intentionally allowed to go on at the same time, the stomach, from farther advance in this, was probably beginning to have its action sympathetically lessened, (see note of p. 66,) and along with its diminished energy, may have taken place a diminution in the quantity of the urine;

functions, we must not say of the kidneys alone, and those of other organs more frequently called

there was a trifling opening of the belly without medicine on this day on which we note the state of the urine, but it was much too slight. Where the bowels continue unmoved for some days after the free operation of a dose of medicine, I have known the furred tongue not get progressively worse from the day after the medicine had operated, as must often happen, being rather less on the third than on the second, the upper functions, which depend on several circumstances, proceeding tolerably, though the constipated state still continued. I rather think I have sometimes also observed the urine increased a little, just at first, under a newly begun animal diet, but on this I cannot speak positively; so that as to the immediate consequences, I am at present somewhat dubious. From the use of some kinds of it, and where it suits the stomach, I would rather expect it may happen differently at different times in the same person. I also know, from some training experiments, where the allowance of *animal* food had not been increased, that there are individuals, whatever be the compensating source, who take on flesh, as we say, more particularly at periods when the urinal evacuation is unusually free; more free than the indulgence of any additional accompanying appetite on such occasions might be supposed to counterbalance, when we consider the high rate at which the comparative weight of fluids is to be taken, in our estimation of the weight of the whole body. I have seen painful distension of the belly, which had continued after numerous free alvine evacuations, cease immediately on sudden copious discharge from the kidneys, which seemed to relieve the vascular system. This was no case of obstruction in the urethra, the pulse was rather above the standard, but not remarkably.

As Dr Rollo in his book on Diabetes, also talks of a too active state of the lacteal absorbents, and an increased morbid action of the stomach, as a cause of that disease, it may be supposed I have taken the more extended notion, as applied to many cases of ordinary constipation, from him; but I had never read his work when I formed these opinions, and drew them up. Though the theories are so far coincident, that, I am happy to say, I consider them in some measure corroborative of each other, yet, as will be seen, they differ in some points. Thus he seems to contemplate exercise only on one side, consistently enough forbidding it and other stimulating causes, where on his principles it keeps up an over-action already existing in the whole system, and in the stomach with other parts of it. But I know that it will often put a check to commencing digestion; as, however, there is a tendency to anorexy on such occasions, in some of these cases, and as some will account even this an increase of action, though a different one, Dr Rollo's opinion of not causing the parts to sympathize with any thing that is to keep up the increased action of the

digestive. If sufficient excretion from the system is made any how, a person may have appetite, and feed well; the upper part of the canal may do the duty, or perform the nutritive functions of a larger portion of intestine in other persons, but, at the same time, there can be no question, that a great natural emunctory and evacuation is the fecal one, and the nearer any individual approaches to freeness in this, he attains more completely, *ceteris paribus*, the state of health which is always to be desired.

whole in genuine diabetic complaint, seems perfectly correct, and this, at the same time, does not take from the force of what I have said in ordinary dyspeptic or other disorder: Indeed, I now observe our ideas have come together on several points, though unwittingly on my part. This work of Dr Rollo, I think it impossible for any one to peruse without interest from the general notions laid down, which are not all of them merely speculative. In conformity to my own ideas, as well as those of Dr R. I beg to call attention to what, in every chronic case of digestive derangement, may take place.—The parts in the same person may, and do pass into opposite states, though naturally inclining to one, there being besides between the two, an intermediate one, even in which, the effects of various remedies may sometimes be reversed, and this, which we are called upon to recollect, I would wish to impress on my readers with respect to the pursuit of single methods of treatment as applied to such.

The whole functions consisting, in particular processes, let the parts once get over a particular point in any state of these, and a very different condition may accrue to them; give a little of the tincture of opium, it stimulates; give a certain quantity of a spirituous liquid, it shall probably raise the action of the whole system; but give a larger, influence the brain in a different manner, by doing so, produce a transference of a particular action from one vital organ to another, and this increase of what was a cause, will, from some change in the intermediate means, it may so happen, reverse the effect.

I regret the length of this note, but some of the matter which it contains I was unwilling should be passed over, and therefore have kept it in this place.

These are functional differences : no one, however, on due consideration, can doubt that there are many structural disorders, and those even in important parts, which will sometimes excite much less the attention of the patient to feelings of present uneasiness, and in reality seem less to disturb the whole tranquillity of the system, than a functional derangement ; without reference, in either case, to the ultimate importance of the causes which produce them. We may, to be sure, say, that in the one case there is generally a smaller portion only of the organ, which becomes affected. But to afford examples, let us observe in the febrile excitement of the brain and nervous system, or in the common increased throbbing and tendency to fulness of the vessels in the head, which we sometimes find in nervous and delicate persons, how much greater is the disturbance for a time to the whole frame, than in some cases where we have reason to apprehend the formation of a real tumour in the substance of the brain, where at first the patient, with the exception of occasional attacks, has his general health very good, has often greater appetite and keener digestion than before, and is probably altogether

unaware of his situation ; the very disease in the brain itself, more readily, too, perhaps, than in other parts, by stimulating to greater action for a time, produces increase of vigour in the rest of the system, though it is of a fallacious sort, or on the contrary, may exist as counter-irritation to disease in the rest of the body. Epilepsy and convulsion fits are known to have existed, where no disease can be *perceived* in the brain or other parts : There was an instance of these in a very aggravated form, in a female, who seemed to have died in one of the attacks, but in whom I could find no trace whatever of structural disease, or other obvious cause of death, though we must be aware, such may sometimes escape us even in examinations which would not in general be accounted hurried. Similar statements are on record as to hemiplegy and genuine apoplexy terminating in death ; cases where the brain, heart, and abdomen have been carefully examined. The spine is in general not opened on such occasions, nor was it by me in the above, but when the head or face is included in the symptoms, there is less inducement to do so, though organic disease confined to the cord will affect the * head, as will the com-

* Case at p. 346 et aliis, of Dr Abercrombie's Pathological Researches on Diseases of the Brain and Spinal Cord, 1828.

mon presence of worms in the bowels. In like manner, how alarming are those sensations about the heart, proceeding from disordered states of the digestive organs only, or from excess of irritability in the part itself, and different¹⁰ causes, when, on the other hand, real organic affection except in anginous cases, sometimes exists without drawing much attention or uneasiness. There is one case very strongly impressed on my mind, where a distinguished individual, now deceased, and whose body was inspected, called the attention of his surgeon, when talking on some other subject, to the sound of the blood passing through a contracted orifice about his heart ; yet this individual, though far advanced in organic disease, as seen after death, so long as the heart could at all perform its office, seldom felt much annoyance.¹¹ In real anginous cases, the paroxysm is probably often brought on by some sympathy, with the digestive organs at the time, air passing up from the stomach as the fit ceases. Lastly, the hardened state of the liver, to the degree of organic affection in this part, and although the disease be not here confined to a small portion only, sometimes does not very ardently call the attention of the patient ; the pres-

sure of the medical attendant's fingers may be the first thing which points out that there is any tenderness in the part itself, and the health in general, though perceptibly, may not, to outward appearance, or even to the patient's own feelings, be very greatly deranged : whereas certain changes from what is healthy, in the mere secretions of this organ, are in some sufficient to produce dyspeptic and hypochondriacal symptoms, with all their sweeping load of actual and imaginary miseries. In all these cases, it is true, there will at last necessarily come to be functional disorder arising out of the structural disease ; indeed, this may in a less obvious manner have preceded it, and by some would be often, if not always, accounted the cause of the other, as we truly may expect structural disease from slight degrees of functional disorder long continued ; but I speak with reference to idiopathic disorder of function, at first at least ; and with this explanation it is hoped, I shall not be misunderstood.

What we now notice I believe will be found a pretty general law of the animal economy, and shews itself an excellent provision of the system ; for whilst the power of recovery may still be with-

in grasp, the attention is most irresistibly called to it, while, in organic disease, it would be of small avail, though in every case the disturbance throughout the frame were ever so great, and produced uneasiness capable of expelling every chance of indifference on the part of the patient. Indeed, it is astonishing under what a load of structural disease, and with comparatively little general disturbance, the body will in certain constitutions hold out, though in the case I am now to mention, it can hardly be said to have injured the texture of any particular organ. I opened the body of a boy, in whom, in the centre of vital parts, existed a medullary sarcomatous tumour, or malignant bloody fungus of immense extent: I do not know whether to consider it as having commenced in some absorbent gland far down on the aorta, or in the cellular substance and fat about the kidney rather, but it was firmly incorporated with this organ of the right side, though scarcely deteriorating its substance, except that the part had become somewhat paler than natural, probably from pressure in this particular constitution little disposed to certain kinds of irritation or action giving much pain; it had carried this

kidney up in front of it, so as to make it present amongst the first appearances on opening the belly ; the ureter, however, passed freely away from it, down to its proper destination : from the situation about the ordinary region of the right kidney, and considerably below it, the tumour stretched away over to the left side, and was divided into two parts of different textures, by a sort of neck which had contracted inseparable adhesions to the great vessels : The growth adhered also very firmly to the front of the spine, to a large extent of the liver, strongly to the duodenum soon after it leaves the stomach, and had forced its way among the fibres of the lesser muscle of the diaphragm, thrusting itself deeply into the lower and back part of the chest. Yet, with all this circumstance of an immense tumour mechanically pressing on most important parts, independent of the disease itself in the abstract, till very soon before death, though of course a delicate-looking boy, the symptoms were any but such as would have led to suppose the real state of matters ; there was not as sunken a condition of the spirits and frame, as we may sometimes observe in certain disordered states of the digestive organs, where the whole evil

is perhaps no more than some fault in the secretions made into the bowels, perhaps along with this, a degree of inaction in some part of the tube. At first he limped a little, as in disease of the hip-joint, with pain in the knee ; this left him much, and near the period of his death the symptoms were liker those of worms ; his bowels were but rarely bound, and he had voracious appetite.

To consider organic disease in stricter reference to our present subject, let us notice a mark by which we may occasionally distinguish scirrhus pylorus from more ordinary functional disease, for they either of them may be attended by such symptoms, as usually go under the term stomach complaints, and such a diagnostic mark, whether or not we should be warranted in making some patients acquainted with the real state of their disorder, may often be no small aid to our own judgment, both in respect to the treatment to be followed, and the hope of ultimate cure, which of course will much regulate this. The diagnostic symptom I mean, is one, if I mistake not, which used to be given by Mr Abernethy, in his lectures at St Bartholomew's ; others also have mentioned the symptom ; it is this. In cancerous pylorus,

the stomach digests at the time the substances put into it, but in a little while after tosses up the digested or partially digested aliment, because it cannot well pass the orifice; on the other hand in many more ordinary disorders of the stomach, the organ rejects more immediately at the time the food which it has just received: And such a criterion as this, when it can be depended upon, may frequently, as we have said, be of no small importance in fixing on opposite lines of treatment to be pursued. The above state of the pylorus, in some cases, may even shew itself externally, but the other method of judging, is fully as much to be relied on, as in touch, other swellings may wear the semblance of the one we now speak of. Structural disease at the cardiac orifice will of course have a still different modification of symptoms.

Partly connected with the present subject of the passage of food from the stomach, is a point in the pathology of heartburn, which, though it may be already known to several, it is as well to notice. In persons subject to this, if it be to the degree of being very distressing, and is experienced principally on lying down, it will often be speedily re-

moved by turning the body round from the left side, so as to rest upon the right; for in the former position it is more apt to occur, and by turning over in this way, the contents do not so much come in contact with the neighbourhood of the cardiac orifice by gravitating towards it, and are more readily permitted to escape by the other. But altering the position to either side may of course at first relieve the pain of heartburn, by merely shifting a little what is acrid from where it had begun to stimulate. I may casually put this query: Has not a difference of posture, on the right or left side, such an effect as would influence the passage of medicine or other articles out of the stomach, when we are afraid of them being thrown up?

Among organic affections, that of the pancreas I should consider of rather uncertain detection. I have seen it extensively ulcerated without particular want of appetite, and where the chief symptoms were, general wasting till the period of decease, with occasional suffering from flatulence, aggravated by an artificial aperture in the parts.

SECTION VI.

Influence of Sleep on the Digestive Organs.

THERE is a point of much importance on which those eminent in the profession have adopted opposite opinions. It is with regard to the propriety of permitting a patient with tendency to derangement in the digestive system, to yield to the disposition to sleep after a meal, dinner, for instance, which we may very often observe in some of these cases. There are those who forbid indulging in this propensity ; but though I do not pretend to establish a fixed rule in respect to this, I have observed that there are persons in certain states of disordered digestion, who have every symptom much aggravated at the time, when they are, from any circumstances, prevented sleeping at the ordinary period of it, for such a length of time, as would in health be accounted a very full proportion of the twenty-four hours ; and without

adverting in particular to sleep after a meal, to which some have and others have not a propensity both in health and disease, and against which, to say the least, were it consistent with the habits of society, I do not in many cases, see any very urgent objection, I remark this as a general fact applicable to numerous instances.

As was observed regarding other particulars, may not this disposition to sleep, or the sleep itself, when a person in these states is fortunately able to fall into it, be a natural effort in the machine to ward off what would be more truly disease; may it not be the effect of general weakness in consequence of imperfect nourishment, from the depraved digestion; or may it not arise from the same weakness that may have partly caused the disease more immediately the subject of complaint? Of course, what we now mention as attendant on disease in the digestive organs, is very different from the occasional languor proceeding from inactivity and over-relaxation, which too much rest may even produce, and at last convert into disease. Under these doubts, one within certain bounds, would be inclined to leave na-

ture to direct a patient in this respect, and if stomachic uneasiness is much relieved at the time by it, which it frequently will be observed to be, one should I think, hesitate a little in interfering much on such an occasion. In simple terms, it appeases many of the distressing symptoms of dyspeptic patients, eliciting a degree of appetite when deficient; and, on the other hand, will often quash the bulimious untoward propensity to take food. There are persons of particular constitutions, who require both much sleep (in contradistinction to mere rest) and much exercise, to insure health, yet, under these circumstances, they sometimes enjoy it in a remarkable degree; but what is now stated in regard to disease already existing, is to be considered in relation to what was before said on the occasional effects of rest, and muscular exertion, with or without mental employment. Since brisk muscular effort soon after a meal will retard digestion, and make it proceed in a more gradual manner, there are persons in whom the state of digestion repeatedly noticed, will be benefited by this, and laxatives rendered less necessary, as, on the other hand, in a different condition of the parts, *i. e.* slow and weakly

commencing digestion, exercise just after food will in all probability do harm ; for there are besides persons in whom under almost all circumstances, it seems favourable to the whole digestive powers, these partaking in and keeping pace with the action of the voluntary muscles, unless disease of one sort or another supervene, but which on its occurrence may in different cases assume very different forms ; in a general point of view, a very opposite train of consequences may take place, from some very slight difference in the chain of those causes which produced them.

From what has been stated then, it may be seen, that the effects of alternate full exercise, or a state of occasional rest, may be different in different stages of disease, or in different states of the healthier digestive process : And sleep itself, if ever indulged in at an unusual time, must be viewed in relation to the opposite states of the parts.

I said uneasiness referred to the stomach and adjoining parts of the canal, is, in many people, much relieved by a full proportion of sleep, but in whatever degree the remark applies to disease apparently existing in this situation, it does equal-

ly so to the lower bowels, or bowels in general ; indeed, I suspect the good effects resulting in the first case, is from the operation of sympathy, frequently not a little connected with the influence it has upon these. I, in general, recommend to persons with torpid bowels to take a great deal of sleep in the first part of the treatment, for, it will often be found in these cases, that the operation of a little physic, or spontaneous alvine evacuation, when it does take place, happens at a time soon after the individual has enjoyed some continuance of this state. There are persons with very slow bowels, in whom this call occurs during the night, and seldom at any other time. It is in a manner the character of the complaint, that there shall be little tendency to gripes, not perhaps from a want of sensibility in this respect ; for I have observed, in many of these cases, unlike the occasional constipation from neglect, in persons not naturally so inclined, that there is also little disposition to headach, which generally shows irritation, if contents are present in too large quantity. There is generally sufficient capability of being irritated in this respect ; and if headach or pain in the belly itself occur, the unaided parts not na-

turally brooking accumulation, if I may so speak, will, in general, soon throw off what would cause any disturbance, and as I think, with less violence than arises from drastic medicine, which, however, under circumstances already specified, may, to be sure, become indispensable. How far the horizontal posture may aid the brain in exerting its energy, or whether it is the effect of position on the parts themselves, and a different operation of the diaphragm, or whether it be in this way at all, or from its effect rather, on secretion and the whole animal functions, that we are to explain the influence of much sleep on torpid bowels, is not easily determined : but the subject is an interesting one, both on its own account and in a practical view. And, as I know, there are persons who are averse to patients indulging in lengthened sleep, I am the more led to dwell on these particulars. It is more natural to suppose, however, that it is sleep succeeding some muscular exertion during some part of the twenty-four hours, if this is otherwise suitable, which will be found beneficial, and not that sort of rest a little ago mentioned, which, the more it is indulged in, the more it creates a desire for itself, a disposition to which we sometimes may

see in certain classes of society. The effect which will be found to follow, in cases where it is necessary to abridge the proportion of time spent in sleep, will show how important is its agency, and how much it is to be taken into account in the treatment of some of the disorders in digestion.

I believe it has already been made a question, in other publications, if what is called nervousness be the cause, or consequence of some diseases : complaints in the digestive system have, at any rate, long been named in conjunction with nervous ones, (see Cullen's Practice, Vol. III. p. 91, also p. 380, 1783,) and if we consider the probable state of the mind in sleep, one would naturally be led to allow it to possess specially recruiting powers, in all diseases where the frame is generally disturbed. But in cases where the bowels are tolerably healthy, I should consider much of the horizontal position, in general rather injurious to such persons, and I have known the pulse reduced in frequency on leaving it. I think, however, advantage may accrue, from making this more an object of inquiry and attention than it seems hitherto to have been.

In some persons, I have known sickness more

apt to supervene on the approach of sleep, but where there is nausea or sickness, there is at the same time greater irritability in the parts themselves, in which case, we would by no means fairly infer diminished action, if this is dreaded, though it may be a different sort of it which is present. It might also be said, that, as the necessity for aliment is less during sleep, the organs cannot possibly be so active at this time; but though the demand for it be less, it does not thence follow, that food, *when taken*, is not readily digested during sleep. Finally, the above state of nausea over night, is rather apt to be followed by the reverse of anorexious feelings, or a want of all appetite for food on the following morning; apparent contrasts, I again say, are sometimes not so far separate as one would suppose: We might in this question, respecting action in these parts, perhaps not unaptly request attention to the effect of a vomiting drug, ipecacuan, given in what are called stomachic doses; and there are some facts relative to the state of water-brash as it ceases, which we might probably now also cite with advantage; but it is unnecessary to pursue this

If it be objected that the foul state of the tongue is more apparent in the morning, immediately after sleep, I reply, that, independent of what may be the effects on the digestive organs, of the fast itself, this state of the mouth is more obvious from the individual having been longer without aliment than during any part of the day, for the different matters, in passing over to the stomach, of course mechanically clean the tongue. Its appearance during the day, will in many of these cases be found to be better, than if less sleep had been taken.

I shall nearly finish what I have to say on this head, by transcribing the following passage selected from among others of a French physiologist, under the article “ Du Sommeil : ” — “ Le travail des viscères abdominaux puissamment aidé par la même cause, trouve dans le repos des autres parties un secours que le facilite et l'accélère. *Somnus labor visceribus.* C'est pourquoi le sommeil procure la digestion complète des alimens les moins susceptibles de céder aux forces de l'estomac, ainsi que l'elaboration parfaite des humeurs rejetées par les evacuations naturelles, comme les urines, les selles, les crachats, les sueurs du matin en démon-

trent le caractère (I.)” Principes, &c. par C. L. Dumas, Paris, 1806, Vol. IV. p. 37.

There may be cases which are exceptions to what we are stating; the same one will vary according to its stages; and there are those in which the propensity itself is excessive, a sort of lethargic state, which, from what I have said, it may be seen I consider as requiring to be moderated by such measures as shall have this effect; there is, besides, one symptom in particular, on which the effects of much sleep and much of the recumbent posture are a little doubtful; I mean the irritable heart. After much mental and other excitation, the circulating system will be tranquillized on the approach and during the first indulgence of sleep, bearing relation, however, to the quantity and period from which nourishment was last taken; but whether the same happens in most persons, in the latter hours of it is more uncertain. States of wasting disease in which, during the first part of the night, the patient is generally more uneasy, are familiar to us all.

Cramp of the muscles, too, so often attendant on derangements of the digestive organs, when the patient is subject to it, is more apt to assail at the

time sleep is taken ; we shall be wrong, however, if, because cramp or other unpleasant symptoms in a weak or nervous state, occur during sleep, we should think them caused by it ; at any rate, a patient will not be freed from this symptom, till his system is somewhat improved in other respects : in a case of this sort, I would endeavour to correct the state of the parts in the abdomen, but would avoid a continued perseverance in laxatives, if the bowels are at all disposed to act spontaneously.

Contrary to what is very generally supposed, much sleep, even if the tongue is cleaned by it, rather tends to attenuation of the person. Additional excretion from the system, which is probably the reason that the feelings are more comfortable, being produced by the activity of the insensible transpiration, which proceeds very rapidly during sleep. And it is easy to perceive, that in excess, it will, on this very account, increase the improper dry state of the intestines. Where important disease is absent, very free excretion by the kidney, as was remarked in a note, does not, I think, reduce the body.

SECTION VII.

Cholera Asphyxia.

SOME may expect that Cholera Asphyxia shall be among the subjects noticed in this treatise. While the disease has occupied the minds of many of the profession, considerable obscurity still hangs around it. The most important ultimate feature, is the cessation of the circulation, the blood ceasing to move and to be arterialized. The affection of the digestive system might be reckoned secondary, like an ineffectual effort of the parts to rid the frame of some offending cause, were it not that it has been generally found among the best preventives of the disease, to correct at the outset any threatened over-laxity of intestine, whereby some necessary ingredient is retained in the system; interfering with which on the other view would only be increasing the disposition to a malady, which it has been found on the contrary to

avert. Other parts are necessarily involved, but the impression on the alimentary system is always more or less distinct and characteristic. It is perfectly understood also that a disposition to looseness in the bowels, independent of fear, is apt to prevail, when the more dreaded epidemic threatens a district, and that the unchecked consequent weakness predisposes in some way to the more fatal malady. Thickened as the blood is at last from the continued watery discharges by the alimentary canal and skin, the artificial supply of fluid to the circulation by venous injection, could the accustomed nourishment at same time either by this channel or any other be introduced, affords a rational enough prospect of relief, but the benefit is seldom permanent. Though the importance of simply checking the preceding looseness should be fully understood, it should also be known that in a very advanced stage, a change on the inner surface of the alimentary canal and the liver, caused by some very active medicine, as the croton oil, whereby, instead of the peculiar watery discharges, the removal of some grosser part is effected, has been found to save the life, and is a practice on which there is considerable reliance.

But to conclude. While many practitioners have in this disease scrupulously prevented the indulgence of the thirst, still in a great proportion of cases, among a variety of intended remedies, water, as indicated by nature, taken pretty cold and freely, though the first draughts are generally vomited, has been found to be what is best absorbed, checking the sickness and recovery taking place.

SECTION VIII.

Operation of Cold Weather.

THE effects of a cold atmosphere have been laid down as “tonic,” and as very beneficial in various deranged states of the digestive organs; but I consider this opinion as something more than merely questionable, and that the very opposite of it, will in many cases be a more correct one. That with most individuals a keen air produces appetite, that it braces, as we say, cannot be doubted; yet there are many persons of peculiar constitutions, who feel their complaints in this part of the system rather aggravated at the time, in this cold state of the weather: These are some of its direct effects, whatever might be expected to follow a longer continuance of this, as in the lengthened duration of cold in other countries; the body, we shall suppose, having once overcome the immediately existing change of the weather,

an improvement might be expected in its power of adapting itself to each little variation in this, and to other trifling irregularities of external circumstances, a want of ready accommodation to which seems, one of the chief characters of a delicate frame. It will be also granted, that there are patients who find themselves better in one sort of weather, and others in another ; but I must state this fact, that I know persons who have scarcely even an unpleasant symptom at all during the warm weather, and yet immediately suffer when the season changes, particularly on the approach of frost.

Frost, indeed, acts so peculiarly in many respects, that I have been surprised it has not attracted more the attention of pathologists. Sores of various descriptions, if closely observed, I believe will be found to have their aspects influenced in some degree on the appearance or disappearance of frost ; its power also in producing the inflammatory appearance in the blood, proves the extensive influence it must exert over the frame, and ought of itself to be sufficient to direct our attention to what other important effects it may have on the animal economy. Let us remark the keen appe-

tite which prevails along with slight tendency to constipation in very cold weather, where the upper part of the canal is in the very opposite state from that of sympathy with the inaction of the lower bowels, if this is their condition ; and any views which we may deduce from this greater desire for food in many at such a time, lead us immediately to contemplate the tendency to too great absorptive action existing near the beginning of the alimentary canal, which is heightened during the cold. The blood being more in the interior, and the appetite of most persons in the state described, it is hardly thought that much stress can with propriety be laid on the probability of a sedative influence, exerted on the muscular fibres of the bowels ; the contrary even may be true ; but whatever is the case, frost does seem often to produce a tendency to constipation in persons at other times by no means inclined to it ; I have found too, a larger dose of a laxative medicine necessary for many persons in this state of the weather, and that it is frequently more tardy of operation. As we see the discharges by urine and perhaps even the skin, in many persons, increased during cold states of the air, it is in every respect probable

that it is by increasing the absorption in the stomach and intestines, that frost has this effect. And do we find stomachic uneasiness in some persons at this rather than at another time, because in such there is then a stronger tendency to disease in their large intestines ; the upper part of the tube too readily sympathizing with the bad effects of frost on these ? I suspect, from observance of particular cases, that in some individuals, this is the fact. It is true that if the vessels of these parts are *unduly* loaded with blood from the external cold, diminished energy in them as well as uneasiness is likely enough to take place ; but however this may be, or however it originates, I consider it as quite ascertained, that there is unquestionably, in many healthy persons, a greater tendency to a sluggish state of the bowels, probably at a part low down, during the existence of frost.

It follows then, from what has now been advanced, that in cases where the aid of aperient medicines is apt to be required, we may with less reluctance direct their employment, during the prevalence of frost, a time at which the parts are generally more decidedly disposed to stand in need of assistance in this way. And the same is to be

said of the temporary use of the animal food regimen.

I spoke at first of the effects of cold weather, in opposition to warm merely, without allusion to frost in particular, and I take occasion here to observe, that I consider this subject a little farther pursued, as itself affording one of the strongest proofs of a peculiarity of constitution in this respect in some persons. We see the appetite of most people more apt to be deficient in very warm weather, yet I know persons, some of them too with tendency to weak, we shall at least say peculiar digestion, who never feel this effect of it, and though they may complain during the presence of cold, find themselves, in warm states of the atmosphere, capable of greater exertion than at other times, perspire freely without being languid, take food heartily, and digest it in the manner it could be wished, that is, without either improper craving for it, or, on the other hand, loathing at it, at the proper returning intervals.

The present mention of the effect of cold, leads us to say that increased or diminished progress of what is passing to the circulating system, in whatever manner it is brought about, may like-

wise have an effect on palpitation of the heart in dyspeptics and others, apart from the general stimuli of the organ ; exposure to a cold temperature, however, in its present effects, seems to have a tendency to quiet the circulation : this, among other reasons, may be from accumulation of blood about the heart itself, which, contrary to the seeming occurrence under some circumstances, and when not taking place rapidly, has been considered as tending to diminish or at least impede its movements ; not I should say, beneficially, where there is a tendency to disease in the part, if the above is really the mode of action. Local cold to the part itself is different, and was spoken of. In various diseases it may become a question whether we shall, by different means, seek to accelerate, or retard somewhat, commencing digestion. A pure air certainly increases the desire for food, and it may not be adverse to the peristaltic or impelling movement of the bowels, but if it increase at the same time in a greater degree, the action of those absorbing vessels situated in the upper part of the alimentary canal or of its absorbing vessels throughout, increase of the quantity discharged by stool, is not likely to follow, on the contrary the reverse

must happen. Air may be pure and cool, or pure and rather warm, regarding which two states of warmth and cold, as opposed to each other, I thus sum up what I have to say. I am not attempting to give such explanations as are universally applicable; nor shall we in practice be able, as above, always to assign exact reasons for differences in the effect of the same remedy in different persons, or on different occasions, this often depending on a variety of circumstances, all of which would then need to be taken into account; but still these remarks may serve as hints, affording a sketch of opinions which would sometimes regulate us in the advice to be given, and when we are called to direct, enable us to judge of consequences, which, from the difference of cases, might seem contradictory. Extreme cases, as they are termed, which appear to stand solitary, are frequently, when not genuinely idiosyncratic, the best guides to the line of treatment in the more ordinary departures from the healthy standard, to which they are in fact often real parallels, though they are passed over when our observation is superficial and imperfect, as having no sort of alliance.

What has been said in regard to the hurtful ef-

fects of cold weather in some persons, of course does not apply by any means to the cold bath, which is suddenly employed, and to which a person is exposed comparatively but for a moment : it is sometimes useful, and very often has the effect of moving the bowels, and, on the other hand, for various different reasons is sometimes contraindicated, as is well known ; but this has no immediate connection with what I have been just stating, and I merely introduce it here, that I may not be misunderstood : neither am I of course at all in this place alluding to the effects of changes of temperature in producing catarrhal affections, which is also noticed only to avoid the chance of mistake.

The animal food diet, when prescribed for very slow bowels, as it improves the state of these along with some of the other consequent ailments, has the most decided effects in removing the distressing sensations of cold in the extreme parts of the body, so apt to be present in such persons. But I have little doubt that the diminished external heat of body after a meal, which happens to some, proceeds from the blood and energies being in them called at first, and perhaps in too great quantity, to the interior.

When the bowels are rather loose, and there is no distinct pyrexia, we may sometimes observe the skin more than commonly florid, and the feelings of the individuals, indicating greater warmth of temperature than is customary to them. The cutaneous circulation is increased.

SECTION IX.

SYMPATHY ;—Influence of the Mind—of the Lungs according to the air respired—of different parts of the Alimentary Canal on each other, and of stimulus by the rectum—Periodical liability which will sometimes render disorder of any sort more decided—Particular Sympathies, some involving intimate connection with the digestive system, and some having no immediate relation to it, &c.

THOUGH this section is set apart more particularly for sympathy of different kinds, it is plain that in its most extended sense, we should be led here to the notice of many things, which have had full previous mention ; they having been necessarily embodied in those notions of disease already maintained.

It would be extremely unnecessary, in the present day, to point out the influence of mental causes on the body at large, or on the digestive system in particular ; that some kinds of mental application, with the bodily rest which they im-

ply, without care, without much anxiety, (original tendency to which, perhaps, forms the most important constitutional differences among individuals,) occasionally rather produce appetite ; that sudden very distressing or very joyful intelligence will take appetite away, which we may see even at very early periods of life, in children under the excitement of expectation : neither need we enter into the particulars of cases where a person has attacks of erysipelatous inflammation, regularly induced by causes such as these : but I wish to call attention to such a case as the following, for the very reason, that appetite, with certain other accompaniments of feeling, commonly depending more immediately on the stomach and adjoining intestines, remained unaltered, or was even vigorous, fully to the ordinary degree. The person alluded to was kept in a great deal not of painful mental distress, but rather anxiety, for the space of a fortnight under preparation for appearance on an occasion which might much concern his future prospects in life ; and in this time he went about, had perfect appetite, and eat very plentifully, yet, during all the while, was without any call to alvine evacuation : He had not changed his place

of abode, we are to notice, and he was of that ordinary habit of having a daily, or almost daily discharge from his bowels, and though not much annoyed about the present to him unusual delay, to use somewhat of his own expression, he said, he fancied he at last perceived a bad smell about himself; at any rate, some part of the great intestines had in him probably for some time contained much dry fecal matter, as at the end of the period, when the successful issue of the business set his mind at rest, the first alvine evacuation discharged a large quantity of it very hard and formed: I am uncertain whether or not he required the assistance of a glyster to remove the first very indurated portion, so as to permit the impacted remainder to escape, but to the best of my recollection, he used powerful laxative medicine, the colocynth pill, during the latter part of the fourteen days. I do not say appetite, with the functions of the stomach, and upper parts of the tube, would have gone on much longer under these circumstances, or that, independent of the bowels becoming in this person, actually filled up in a manner, sympathy with inaction in other parts of the canal, would not have

by and by had its influence, though the parts showed unusual powers of resisting it ; nay, this effect of sympathy, perhaps might have been obstinately continued in the way we had formerly occasion to notice ; but as circumstances were, I must refer it to the state of parts repeatedly noticed, (see Sect. II. &c.) produced on this occasion by the condition of the mind. I consider this a well marked case of interruption to the functions of the lower part of the canal, without the same taking place in the other, which on such an occasion more frequently occurs, and which, from the diminished quantity of aliment used, might most naturally be attended with a temporary cessation of the usual discharge from the bowels. The mere evacuating of fecal matter too, as we all know, is in many persons considerably under the influence of the mind.

There are persons in whom the above effects do not readily follow a similar cause ; but with regard to some, we have only to extend a little the information derived from a case like the present, and suppose the causes of mental irritation longer kept up, to take into account also the different degrees of over-interest, with which differ-

ent individuals are drawn in a manner they cannot help, to what engrosses their attention, as also the effect which deranged digestion in its turn has in keeping this up, the reciprocity being considerable, and to consider the perhaps original differences of power in resisting diseases, to particular kinds of which every one may incline,—to understand how various degrees of liability to disorder may subsist amongst different persons. That derangement in the digestive system powerfully affects other parts of the body, few can now doubt; reflection on the connections of the splanchnic nerve, observance of the actual phenomena of disease itself, instance the swelling of the upper lip, &c. from worms, not to multiply examples, on a few of which, however, we shall presently comment, and attention to what has been already written on the subject, can leave no doubt as to the fact, original predisposition in a part, or other cause, deciding each particular local effect of its influence.

The direct effect of the air, and perhaps of the sort of employments in a large town, is, in many robust persons, to produce a tendency to slowness

of the bowels, even if their life is not a sedentary one, and the desire for food be for a while scarcely at all diminished.

The following shows well the close connection as to function between very different parts of the alimentary canal. A case occurred in the practice of a friend of mine, where a person had been very long afflicted with a most distressing prolapsus of the gut, which had been down for several years ; it adhered to the person's dress, and as may be supposed, caused much uneasiness : yet this yielded readily to a persevered-in course of purging, and such medicines as altered the improper secretions which were poured down from the upper parts, producing irritation in those below. This case too is to be held in view on other occasions, and the treatment will be found the most efficacious in some local complaints of this part, where many practitioners do not, I may say are afraid to adopt it, from the dread of aggravating what it will often be found to cure : Some degree of itching and heat about the extremity of the gut, a sort of tension at the verge of the perineum, in some persons precede the access of diar-

rhœa, and different evacuations from the bowels, when these have been previously somewhat constipated.

This leads me to speak of what some of the profession have termed "soliciting an evacuation." I shall only observe concerning, it, that, both theoretically reasoning on the connection of the different parts of the tube, and proceeding on the grounds of what many have experienced, there can be no doubt, that, in some persons, where the bowels are not very slow, a regular call from habit may be established by the effort made in this way, and even where the tendency to torpor is considerable, this stimulus, from the contractions and relaxations of the sphincter and elevator muscles persisted in, may aid, in no small degree, any other measures put in practice. It may, however, of course, be carried too far. In some, a call to the water-closet will be provoked, by permitting the bladder to become uncomfortably distended. From its anatomical situation, this is not unlikely to happen, but such a practice can hardly be approved of.

In considering the efficacy of stimulus communicated from below upwards, I remark that mild

clysters, I am convinced, may now and then be used with the utmost advantage, in almost every sort of case where aperient medicines are much indicated, could the aversion of some patients to their employment be more easily overcome. And though in cases, where the large intestines become filled with dry fecal substance of difficult expulsion, there can be little doubt that even in these, when not extreme, we can, by means of purgative medicines administered by the mouth, produce such secretion from the parts, as shall moisten and admit of the matters being more readily thrown off; yet we would act much more consistently on such an occasion in directing a simple glyster, which does not grate the stomach, and injure the adjoining small intestine, or otherwise weaken the system, when this is not professedly our object, as may on other occasions, sometimes be the case. A very stimulating one is, in many cases, contraindicated upon principles formerly mentioned, when on the subject of saline medicines, as an occasional aperient in slow bowels. One of any sort ought not, for the same reasons, to be too often repeated.

 Injections are useful also on other occasions,

where the aid of aperient medicines is required, but cannot be employed without producing overcoming degrees of sickness, from some peculiar state of the parts.¹²

Aperient means not being always equally necessary, let us take the following consideration into account. Without paying much attention to the old doctrines of critical days, yet if we advert to the attacks of some intermittent complaints, and various nervous disorders, I think it probable, that there exists in certain persons at least, if not in all, some periodical revolution (or call it by any other name) of the system, modifying the accession, and producing frequent changes in the appearance of different disorders, not always traceable to outward circumstances. I am apt to believe a close observance of some points relative to this extensive subject of the digestive organs, in persons inclining to derangement of them, evinces in some degree the truth of what we are now alleging. Differences of recovery from accidents, or other occasions of violence done to the body, might be considered with respect to this. Also in individuals subject to distortion of the spine,

that arising from weakness of the muscles, not originally from disease in the bone itself, it will be observed that the complaint is sometimes liable to temporary increase, without any very obvious reason, and again leaves them as they were before: This is almost always accompanied with general feelings of relaxation in the body, which, so far as the muscles are concerned, readily enough accounts for the circumstance. I regret that I have not been able to ascertain so accurately as I could wish, whether the return of this state in these individuals is regular, but I suspect it will be found to be in some degree so, and is then of course referable to what is alleged in this paragraph. The tendency to relaxation in persons in general, is evidently considerably under our control, as we may observe in the effects of those measures pursued in what is called training, a method frequently used on different occasions, where individuals are intended to perform some feat of continued muscular exertion.

With regard to derangement in the digestive system, it is the so ready recurrence of disease from slight and perhaps inadvertent errors of the patients, which is chiefly discouraging on many oc-

casious where an attempt at cure might otherwise be rationally made. In this manner the healing science frequently loses credit, and, on this account, even supposing our knowledge in the minutest points of treatment were perfect, a disease intimately depending on the digestive system, may often be pronounced incurable, not that it is in fact so, but that, from the very nature of things, exact attention and adherence to such a method of treatment, as would meet every trifling object, is almost unattainable. Still, however, it is deemed that much may be effected in some of these points which have been mentioned.

There remain to be noticed, some circumstances which exhibit well the connection between different parts of the body. The first class is illustrative of those sympathies in which the digestive organs are more distinctly concerned. It may often be observed, that when a laxative medicine is taken, especially when it is very much required, a degree of pain in the eyes is attendant on its operation, where this was not previously felt. I saw this strongly exhibited by a patient, for more than two years afflicted with disease of the hip-

joint. He laboured under considerable derangements in digestion when I first saw him, and took at first very large doses of medicine, which produced only the most trifling evacuation from his bowels, and of the usual black improper appearance; but on the very first day that the barrier seemed to be overcome as it were, that the medicine which was from necessity in his case used in such large doses, had been able to stimulate, shall I say, irritate the parts to full contraction and secretion, so as to expel a portion of feculent matter, the irritation excited was in some measure sympathetically transferred, and he was seized with considerable uneasiness in the eyes, so as to make them, rather than the joint, from which he had already suffered so much, the subject of complaint when I entered the room. This comparatively trifling symptom, as might have been expected, presently subsided, and it is now only mentioned, to call attention, as much as possible, to every part of this interesting subject.

Among the common class of sympathies between the digestive system and other parts, examples may be adduced from states of the auditory organs. And though deafness does no doubt frequently

exist as a mere local affection, as far as can be perceived, independent of the digestive organs, I might bring forward cases where habitual deafness has been temporarily removed, and an approach to the usual degree of acuteness of hearing produced, for a short while, by the vomiting up of a meal from the stomach, rather tending to make good the opinion of a certain excellent teacher in surgery, that "a deaf person is more apt to hear worse when the stomach is out of order." Yet much on this head I need not say, having little in addition at this time to advance on the local or constitutional treatment of such complaints, which can be of much practical importance, or which would not at once suggest itself to any intelligent member of the profession. Syringing the parts with tepid water gently, not with force, as when we are desirous of removing concretions, frequently affords great relief from local uneasiness here, if such exists.

The great influence of derangement of the digestive organs, in some cases where there is ordinary maniacal tendency, is also well worth attention. See on this subject, a paper in the *Lond. Med. Trans.* Vol. VI. 1820, p. 290, &c. where,

from a case of insanity occurring under peculiar circumstances, may be gathered an important lesson, as to what may sometimes be its exciting causes in the digestive system on other occasions. And the same volume, in a different article, p. 368, *et seq.* contains some judicious remarks on the appearances of the egesta, tinged by what is taken into the stomach, independent of what is owing to either redundancy, or a diminished quantity of the gall.

A gentleman who was troubled with diarrhœa for a period of time, dated its entire cessation from the time he had some decayed teeth extracted.

A lady was affected with temporary attacks of pain in one knee, sometimes excruciating. Nothing was to be seen exteriorly; it immediately ceased on the ejection of air from the stomach. She considered that her digestion had been indifferent.

A gouty old lady, who used occasionally to be seized with pain in her limbs, and the soles of her feet, on these last being rubbed at such times, used immediately to have copious eructation from the stomach, with relief of the pain in the extremities.

I have observed that such motion of the upper extremities as requires a degree of effort in those unaccustomed to manual exertion, or slight blows on the arms, or grasping them with some force, shampooing parts of the surface of the body, or changing the set of muscles last in use, though apparently very trifling measures, will sometimes have the effect of aiding in the expulsion of air which is giving uneasiness in the stomach or bowels. The external impressions made in this way on the nerves are propagated or transmitted to those in the interior, or in whatever manner it is to be accounted for, such is the fact. External friction, gentler or more rough, over a deeper seated part, is known to be not without its influence on many ordinary occasions. And to this we shall revert under the sympathies less connected with the digestive system.

I suppose the following may not be uncommon, but I know an instance where, when there is increased action in the Schneiderian membrane, or sometimes when the irritation is confined to slight rawness of the palate, it is generally attended by an increase of appetite and comfort in digestion, which falls back to its usual state in this individual

when the above symptom subsides. Some would connect this with the discharge, but this cannot be said to exist when there is no more than the slight affection of the palate; and besides, when the nasal membrane is violently affected, I have seen this individual suffer on the contrary loss of appetite, and the other more complete pyrexial symptoms of catarrh. Neither in these slighter affections had this person made any change in his common occupations, or been using laxatives more than he frequently did. The excited state of the parts in the fauces, where taste and these perceptions reside, may be one cause of the greater appetite and relish, while the same taking place along the course of the canal for some way downwards, digestion itself is found in more than usual activity. I have suspected that the brain itself is at such times excited beyond what is usual to this individual, an effect seen in some forms of catarrh, while distincter pyrexia is still absent. Yet in these affections, his pulse, though sometimes, is by no means always, accelerated from its ordinary rate of 60.

A boy about 10 years old, recovering from a fever, was seized nearly simultaneously with bu-

limious appetite and pain in the ear. These had continued for the space of three weeks; and I saw him for the first time on the 3d December 1828. Much food of the grossest quality was greedily swallowed, and water drank with the utmost avidity. Combining the circumstances with the information afforded by such a case as the last, I considered the increased action in the two parts not merely coincidental, intimately connected as different ones are found to be, and the ear being referred to, conceived the energy of the nervous system to be in some way more than commonly excited, and influencing the abdomen. He was pale and a good deal wasted. The urinal discharge was not enormous, but the bowels exceedingly open: pulse somewhat quickened. There was a slight discharge from the ear, the pain in which was not then much complained of. I endeavoured to diminish the quantity of nourishment, solid and liquid; prescribing opium with the intention of diminishing the irritation. The parents, in the lower ranks of life, were not firm to what was enjoined, on which account I did not see him again except once for several days, when I found the symptoms nearly as at first. Mr

Wishart visited him with me on the 9th, when the occurrence of mental affection, very distinctly marked, showed that my first notion as to the state of the case was not erroneously formed. We learned that on this day, and part of the preceding, the excessive appetite was diminished, and the patient was apparently in a very low state. Mr W. fearing the sinking effects of venesection, we directed leeches for the head, and the application of a blister after their removal. The patient, however, had resisted the proper use of both, and on my visit next day I prescribed the removal of some blood from the nape of the neck by cupping, which was done to the extent of ten ounces. After this, on the following day, the symptoms had risen again, the brain probably being relieved from a greater degree of oppression ; but, however this may be, the appetite was as great as ever, considerable maniacal raving being now present, with violence in his demeanour. I had a stream of cold water run over his head from a jug, renewing the contents of the vessel as it was emptied, and in the after part of the same day (the 11th) I drew some blood from the arm ; but in this, as well as other measures, not having the sort of co-operation

on the part of the parents which could have been wished, they were not fully prosecuted. He was placed under some partial restraint. He was often rather cold, particularly in the feet. The affection of the mind sometimes changed to despondency. Mr W. saw him with me again on the 14th, but we agreed that, situated as he was, little could be done with any probability of benefiting him. The connection between the cerebral mass and the digestive system, is well illustrated in this case. Late in January I had an opportunity of examining the parts in this case. Slighter traces of adhesive inflammation appeared in the deposition of coagulable lymph on the upper part of some of the convolutions of the brain, while its substance generally was rather soft, and there was copious effusion into the ventricles, serum pouring also freely from the great foramen. Several introsuscepted portions, uninflamed, and of apparently very recent occurrence, were found at different parts of the intestines, not otherwise in any way remarkable. He had convulsion fits at different times towards the termination.

I saw another instance of greatly increased appetite, attending symptoms of increased cerebral

action, in a case which had for a long time showed an apoplectic tendency, without such a state of the digestive functions. Indulgence was here scrupulously prevented. The person was far advanced in life.

The presence of farinaceous matters which have been long exposed to heat, or even hard biscuit in the alimentary canal, it is known, will sometimes show itself in mucous discharge from the bladder or urethra. Occasionally in a very short time.

Medical literature is already in possession of facts, showing that muscular induration threatening to suppurate, will sometimes disappear under measures chiefly directed towards the digestive organs.

Paralytic states also of the larger muscles, as those in the lower extremity and other parts, have been known to be removed by the cure of abdominal disorder alone ; these I notice more particularly in remarking that I have seen a favourable termination here, where the proofs of digestive derangement were not very obvious, at least not so much so as to preclude even the probability of incipient organic affection, which difficulty

of detection as to the former, by the usual symptoms, though, on the one hand, embarrassing, is, on the other, a very agreeable reflection at the outset of any attempt to cure where circumstances are forbidding.

I was called to see an individual rather of an infirm constitution, and long inclined to a too free use of alcoholic stimuli though generally short of intoxication, but latterly living temperately, previous even to the attack on the face which is to be mentioned. A numbness and want of power in the arm was succeeded by a paralytic affection of the face with lolling of the tongue to one side on the attempt to speak, while the arm was in the meantime comparatively almost well, at any rate much better than before the face became affected. This individual referred his sensations to the abdomen, and talked of a "stoppage," laying his hand across beneath the epigastric region. He had been in the habit of taking laxatives for some time. The face was drawn to the same side as that on which the arm was affected, not the other on which the loss of muscular power first occurred. Neither in my own opinion, nor that of a physician who saw the patient with me, did the

pulse indicate the propriety of general bleeding. A few leeches with some slight cupping at the temples and low diet were tried not with very great improvement. But most encouraging cases do sometimes occur. For I have seen affection to all appearance completely hemiplegic, nearly entirely removed after some months. The original general bleeding on the accession of the coma, did not exceed ten or eleven ounces, but the state of the pulse did not warrant repetition: cold wet cloths were applied to the shaved head, and though quite insensible for some days at the time of the attack, which seemed very severe, this patient, who was elderly, enjoyed for many years as good health as ever, with equal strength on both sides of the body. The weakness which remained in the fore arm of the affected side was the slightest possible. So difficult is it to pronounce what is organic lesion, or at least if this do exist, the degree of it admitting reparation. During the recovery of this patient, when at any time the pulse seemed casually to mount, swallowing a little liquid or a change of posture, brought up air from the stomach, and the symptom vanished.

Where looseness with the dejection of a dark

colour, has been cured by a few doses of the blue pill, I have known painful rheumatism crippling the individual to incapacity of locomotion, very speedily removed, no external application being employed.

Mr Abernethy mentions the cessation of a purulent like discharge from the lungs, to the extent of more than a pint daily, on the removal of diarrhœa by calomel and opium. Perfect recovery followed.

The difficulty of inducing vomiting as usual by the emetic tartar, when the chest is the seat of the increased action, constituting the inflammation of a pneumonic attack or pleurisy, is well worth contemplating. I have seen this manifested in a less degree in phrenitis.

We cannot pronounce so confidently as to the *first* seizure in the more mixed case of p. 197; but of all the rest, we may say that such occurrences are truly to be attributed to what has been styled sympathy or consent, that is, a part taking on the actions or irritation of another, with which it is not immediately connected; and every one must be aware of the extensive operation of this principle in various ways in the animal system,

by whatever link, as through the medium of the nerves or otherwise, the correspondence is effected.

Besides this use of the word sympathy, there is another employment of it, or rather, what I allude to may be said to be of a somewhat different nature, and is known oftener by the term propagation, which, as applied to continuous surfaces in general, mucous or serous, or to any continued surface, is an interesting subject of consideration. Disease of the digestive organs will exert a local influence on parts at a distance, or those not immediately connected with them, of course, in the first way, and it may extend itself in the organs themselves, or certainly that part of them consisting in the alimentary canal, in both manners.

Propagation along continuous secreting surfaces, is a principle which may be applied on many occasions, and will explain numerous symptoms of disease throughout the body. The following belongs rather to the next set of cases, but it illustrates this subject. There is much reason to credit the opinion, that the chronic inflammatory state of the windpipe, producing an almost constant hoarseness, with feelings referred to the tracheal part of the passage, is sometimes propagated

downwards, producing more important disorder in the lungs themselves ; that the converse of this, with regard to the windpipe, I mean disease spreading upwards, is often the case, the condition of phthisical patients, I need scarcely remark, is a familiar proof ; but facts illustrative of the above, though of less frequent occurrence, are also not wanting. Some will say the lungs are in these cases diseased from the first, and that, although several ordinary symptoms of this may be absent, the hoarseness does in fact proceed from irritation in them.

Some of those instances of sympathy, which do not seem to involve the digestive system more than that every part is more or less connected with another, are now to be adduced for the sake of comparison.

There is a gentleman, who, whenever he indulges in the use of snuff, has an amazing perspiration produced in the palms of his hands and fingers, which he is not troubled with when he abstains from subjecting the mucons membrane of his nose to this stimulus. When the fact as to the perspiration first came to my knowledge, I

could hardly consider it otherwise than an idiosyncrasy, showing the connection between different parts, which, however, does not manifest itself where a less degree of irritability or susceptibility is present. But I suspect now, from further observation, that it may be extended to some other cases, and that where there is a disposition to excess of local cutaneous discharge, for example in the lower extremities, such is sometimes aggravated by the above cause. Sneezing from it, the whole intercostal muscles and other parts being immediately brought into involuntary play, is a very extended effect of a merely local stimulus.

The suppurative action, any how induced in a part of the body, is seen to be not unlikely to show itself in other situations where there is during this a solution of continuity by abrasion or otherwise.

I removed a wart by excision from the lip of a young lady, and on the following day a cluster of these which had for some time occupied the back of her hand disappeared without application of any sort, or fever.

An oscillating motion of the head, in some degree even on the pillow, ceased on the removal of a carious tooth.

There is a gentleman in whom pinching of the skin on a part of the extremity of the foot, immediately causes a tingling sensation on the outside of a part of the chest; and there is another instance in which the pulse in certain states of the patient's system has been made to intermit each time by so apparently insignificant a measure as this of temporarily irritating a part of the extremity.

The following case of the effect of issue is well marked. A spitting of blood was removed on the introduction of an issue into the arm. After a time it was discontinued, and the complaint returned; the issue was replaced, and the spitting of blood a second time left this person.

I directed two or three leeches to be applied to a swelling over the bursa, near the insertion of the Achilles' tendon, occasioned by the continued pressure of the back part of the shoe in certain states of constitution. After a very small quantity of blood began to flow, this person was seized with most alarming syncope. I at one time thought, this peculiar effect had some connection with the gouty tendency of this individual; but, though rare, I know similar instances in younger persons,

where the oozing of a very few drops of blood from any part by leeching, is followed by disposition towards fainting, not easily removed. There are two brothers in a family known to me to be thus affected.

A trifling quantity of blood removed by leeches from the surface, will sometimes relieve pain quite in the interior.

A part being complained of, impressions made strongly on any other, if aggravation is not thus caused, as may happen, will derive for the time being, or a longer period, from the first; and milder ones also, on the other hand, have in many states, soothing effects more important than might be anticipated from so slight an apparent cause, whatever be the mode of operation.

Tight shoes compressing the vessels will in some persons produce soreness of the eyes.

An oldish woman was confined to bed, and complained chiefly of a burning heat, as she described it, in the soles of her feet. This ceased, but the next day, though without complaining of pain in the head, she became fatuous; dying in the course of a few days with strabism; at least shewing with little doubt the nature of the translation, if

the phrase sympathy is here objected to. The bowels were in the state usual with her, in general not very good. No examination of the body took place. Heat, independent of pain, will indicate local determination. As to the head, I have known neither of these complained of, and unbetokened on the occurrence of greater insensibility, when after a few days' existence of other symptoms of loaded brain, dissection exhibited the part turgid with blood, unnatural adhesion in its interior, and its coverings full of this. Unusual sensibility to the impressions of radiant heat in particular, may even, I think, be seen in the course of some individual nerves, as if from being continuous, they partook in what is felt in this respect in the brain itself, in some persons not dangerously affected. On the point in general, of pain, (I do not speak of mere heat,) either in the seat of attack, or at a distance, always indicating the presence of inflammation, when it really exists, I have to say, that I opened a body where death took place from it in the peritonæum and bowels; and where, though some free bleedings were had recourse to from the first, on account of strength and frequency of pulse, with fever, yet a feeling

of "sweldness" in the belly was from the commencement, the extent of the patient's expression, as applied to that part or any other. The disease, which was only suspended, not removed, ran its course in from three weeks to a month, terminating in dropsical effusion. The bowels adhered to the parietes in front, and to each other, rendering, I mention in passing, tapping, of course, in such a case impracticable, had it been otherwise admissible.

The following, if we consider it a little, probably should not be reckoned among the sympathies; but it is put down as exhibiting one of those curious apparent connections between distinct parts, and is besides one which is pretty uniform: I allude to the peculiar state of the nails in those affected with pulmonary consumption. It is not improbable, however, that it is only the consequence of the general weakness, being sometimes observed on other occasions of suppurative action and hectic diseases, though the importance of the lungs as a part renders its occurrence from them so much more marked, as to have erected it into a symptom on which there is considerable reliance. The life in the nail is more precarious than in

some other tissues, as the occasional injury done in fever, &c. points out ; and the growth may be partly real,—reaction in a weaker part to preserve its vitality for a time, and partly apparent from the retiring of the fleshy support, or more correctly parenchymatous substance beneath and around.

I have sometimes examined the brains of consumptive patients, in whom the mind had been much impaired. The following is remarkable enough. The pulse was much quickened, but when I saw the patient the cough was trifling, and the chest hardly complained of, so as to deceive myself and another in attendance, regarding the seat of the disorder, auscultation being then less in use ; much mental alienation, or rather entire loss of the faculties, for some time before death, along with the frequent pulse, being the chief symptom. I found this person's lungs removed by the disease, to an extent that made respiration a matter of surprise, a small portion only of them remaining ; but the brain itself, where I looked with great attention for tubercles, was as sound as any I ever handled. From the office performed by the lungs, such an occurrence as the

above also, is hardly to be called sympathy ; insufficient supply of blood to the head, and in some degree its imperfect decarbonization, probably giving rise to the state of the sensorium, but it is mentioned, as an instance of remote parts appearing to be simultaneously affected.

Cases have been mentioned, where for a time loss of voice alternated with loss of labial articulation ; that is, when the power of producing sounds in the larynx returned, the command of the lips was lost, and *vice versa*. In these, no instances of the kind having as yet occurred to my own observation, I am uncertain if there was satisfactory evidence of how far the digestive system was engaged ; but I do not believe it was particularly concerned.

We may often see instances of common hesitation of speech, which becomes worse when the bowels are deranged, but whether in consequence of these, or whether both happen together from tendency to general disturbance in the frame at the time, it is not always so easy to determine. For we find some of these persons always more or less so affected, however healthy in regard to digestion, though our treatment of the complaint will be na-

turally directed towards the digestive system, when there are distinct symptoms of visceral disorder at the time.

The following case I should be uncertain whether to refer to the first class, or rather to the latter, or a still different one, viewing the abdomen here almost simply as an inflamed part ; inasmuch as that in respect of local irritation produced in another situation, it on the contrary in a measure ceased, when this place became distinctly affected. Form what opinion of it we may, it is sufficiently remarkable. A middle-aged man, often troubled with headach, for which he used to get himself bled, had a severer attack of pain referred to the head, with delirium and general restlessness, relieved by a full bleeding, but this was followed in a few hours by inflammation of the bowels, proving nearly fatal, notwithstanding the most active treatment : The blood of this person at different venesections, was very buffy. Disease may sometimes be expected to come out, as is said in ordinary language, or show itself simultaneously in two or more different parts, sometimes alternatively or in sequence. Were not hasty con-

clusions to be deprecated, more especially when they may lead to important errors in practice, I would say the former is oftener the character of what we attribute to those effects which receive the name irritation. In a female at a very advanced age, but capable of taking a good deal of exercise, I saw violent diarrhœa, without particular increased frequency of the pulse, attended during its continuance by much mental confusion. Remedies being used for the bowels, both complaints wore off, and left the patient in her usual state. This person long showed symptoms of determination to the head, but except on the above occasion, without the least tendency to mental aberration.

I have known *pyrexial* headach, with redness of the eyes and throbbing of the carotid arteries, very slightly relieved by a moderate bleeding at the arm, yet cease almost entirely on the ejection of a trifling quantity of some discoloured fluids from the stomach. Venesection itself, hardly to be used at all under such circumstances, would, if carried farther, probably relieve the part, but this with every likelihood of doing so, only for a time, if the offending cause in the stomach continue. It

should not, however, always be inferred, that when the head is relieved by vomiting, a tangible irritating cause was in the stomach. The act of complete vomiting, though in forcing up the blood with more violence to the part at the moment, it gives great pain, will sometimes afford relief to this and the previous sickness, even when almost nothing comes up ; the contents of the head are temporarily compressed, perhaps as happens¹³ with a pained part when we occasionally involuntarily grasp it, while salutary diaphoresis of the head and whole body are excited, or some will say it is the functions of the stomach itself chiefly which we change. But the improper state of the contents of the stomach is not a reason why on many occasions our remedies should not be mainly directed to the removal of the symptoms in the other part, where circumstances point out that the digestive organs, important as they are, are only secondarily affected.

Hysterical disorder, whatever is its exact nature, sometimes presents itself not without considerable complication. In a female aged 26, who caught cold and died, after a few days illness, a short time previous to her intended marriage, there were symptoms, which but for their fatal termi-

nation much resembled a case of this sort. Not temporary determination, but extensive fatal injury, as was found, had occurred in the head. It is very worthy of notice, that the ovaries, particularly on one side, were more than twice their natural size, and that there was a considerable quantity of bloody effusion, or blood itself lying in the pelvis round the uterus. This seemed to me, pretty much of a natural size and appearance. There was nothing particular in the aspect of the bowels, except that they were very much collapsed, probably from the effect of calomel and injections of senna, which, notwithstanding the state of the head, had operated freely, even near the period of decease. There was no reason to suspect the moral character of this person. She had not been married before.

The relief afforded to other parts, by the introduction of the feet into warm water on many ordinary occasions, whatever be the state of the abdominal viscera, is a familiar illustration of sympathy, of transference of determination, or of that which takes place, in whatever mode we may choose to express ourselves.

There are two gentlemen in whom severe attacks

of rheumatism in different parts of the body, have on several occasions succeeded the cessation of the more violent stage of common gonorrhœa. Some might hardly reckon these symptoms connected in the relation of cause and effect; but in one instance they have happened with much regularity, and if so connected, the succeeding complaint is probably owing to a degree of irritability engendered in some way in these persons by the acute previous disorder.

Instances of secondary sympathies, and these probably often by the intervention of the digestive organs, there is every reason to believe, take place in the system; for example, a part exerting an influence on the digestive organs, they in their turn may produce an effect on some third situation, and attention to this, it is easy to perceive, may sometimes be of practical value.

NOTES.

NOTES.

Note 1.—P. 9.

It may certainly be well objected by sceptics on biliary pathology, that it is somewhat paradoxical, that the absence of bile or gall, should at one time lead to whiteness in the stools, and at another to the opposite, a black colour. This may perhaps admit of some answer, perhaps not; but, however this may be, I will assert on the grounds of observation, that in either of these conditions, to whatever they are attributed, complaint referred to the digestive system, is with considerable certainty improved by the employment of some mercurial medicine, and I cannot help believing its efficacy on such an occasion, to be greater than that of other common drugs, merely aperient. Their different effects are well contrasted by the following fact. I have known stomachic uneasiness occur where aperient pills have been taken habitually, yet on the use of a few grains of blue pill in one or two doses, the symptoms removed, rendering unnecessary the farther use of an alkali, taken almost unavailingly for weeks previously. I do not mean to say what takes place here, nor that the colour of the stools is the unfailing criterion; and by no means intend to convey an idea, that the habitual confined state of the bowels is thus removed; but the simple fact is as stated. I have known a mercurial useful, where, if we are ever to trust to the reports of patients, it has had no sensible laxative operation.

One of the best methods of investigating this, is on animals killed after the administration of preparations of mercury, while others are inspected without having taken such, or under other medicine, tracing the intestines up to the mouth of the choledochus.

A pathologist who, not without reason, ascribes much to proper hepatic secretion, makes, however, this observation, "that in many persons in whom that secretion is either for a time wholly depressed, very deficient, or much depraved, it does not appear that the nutrition of the body is defective." I do not know how far the following is suitable to his views, but in respect to local disturbance, deficiency may be contemplated in two ways: If the usual secretion is not performed by the liver, there is not the necessary removal in this form, of a part of the large flow of blood it is known to have through it from its artery, and *every* viscus of these parts except the kidney, whose veins are left out; tending then to the oppression of what may be threatened with over vascular action: and secondly, the bile which, as excrementitious matter, should in general be leaving the body, though in very different quantities, according to constitution, may besides be in some way producing topical irritation in these; proving, independently of experience, the influence this part must have. The artery, as has been well remarked, does not seem larger than would be necessary for its own substance, compared with that of any other part of the same size; and besides, if the meseric veins have such agency in imbibition, (see p. 74, bottom), their blood must differ much from what has made the circuit of other parts, containing at first elements, which in this passage may never reach the heart. As to defective nutrition of the body in the presence or absence of the usual biliary secretion, I am inclined to believe, from what I have observed, that a forcible expulsion of it in large quantity is a sort of abdominal discharge, much calculated to reduce the person; and though it will bear no comparison, with the larger bulk of what is abducted from the mass of the circulation by the urine, there must be something in the ingredient or the manner the other is withdrawn, which enhances its consequence in this respect. The urine is taken from blood of the same kind, with that already on its message through the body, which is very different as to the other unless it is really pro-

duced from the hepatic arteries. (See note at p. 142, middle of the page, and the last sentence of Sect. vi.) Human bile from the gall-bladder, in trials made by Dr Duncan and myself on three specimens, was found to be of the sp. gr. of from 1016 to 1020. The heaviest was from a person who died of a violent death, the others after expiry from wasting diseases. The proportion of albumen in bile is large. The circumstance above-mentioned, of reducing the body, to whatever owing, seems of some consequence.

The state of the biliary secretion, though of acknowledged consequence, is doubtless sometimes overrated: and I should consider the importance of its deficiency or presence, much in relation to the habit of the individual.

Note 2.—P. 55.

I am not aware that the effect of saline medicines, used as purges, has been very patiently tried in diabetic disease, more particularly where the saccharine tendency is not very great. Dr Prout, p. 74, 1825, says distinctly they should be avoided; but this is on the ground of their operating perhaps diuretically, which is the very opposite of my intention with regard to them.

I had at one time also an idea, rather crude I must own, that the possibility of success from the very opposite practice was theoretically tenable. Considering that temporary artificial increase of the symptom by medicine, might be expected to be followed by a subsequent diminished action in the urinal secretory organs, for similar reasons to those, from which we would look for it in some part of the bowels following the use of very strong drastic purges. Like consequences in the machine generally follow over-excitement of any sort; as on the other hand the reaction of what has been depressed below the regular standard, (for example the vascular system), if it do but regain this, sometimes does not stop, till it proceeds rather above it. I did not of course mean here, such diuretics as act principally on the kidneys them-

selves, which are by many considered to be little more than passively concerned in the disease, in removing what is forced upon them from the system, their overaction being then accounted the cause of their diseased appearance when this presents itself in the dissection of diabetic patients. The above was not worth recurring to, but that many of the proposals with regard to diabetes, disappoint on being brought to the test of experience.

Note 3.—P. 59.

Perhaps there was some difference in the quantity of fluid, in this instance water, swallowed by each, and which, in passing off by the proper course, the bowels, (the very object we would often wish to accomplish, and which the salts, in a sufficient dose, of course, disposed it to do,) had influenced the appearance of the fecal bulk. In the next set of experiments, just going to be noticed, and in which last I employed three animals, giving the aloetic medicine to two of them, one of these took fully an equal quantity of water as that to which I gave the salts, the weather being now very warm. They had rather less animal food than the others, but this was not from design; nor from the slight difference, (the quantity given to the first not being great) do I conceive we could expect any notable difference of the appearances under medicine.

Note 4.—P. 70.

One might here ask, how that state of frame, understood by the word hardy, a state in which it is inured to every vicissitude, is brought about?

Note 5.—P. 85.

We may perhaps say scrofula is that state of body in which local disorder of certain kinds, arises from causes inadequate to produce it in persons not of this habit: still, however, this does not define what it is not; applying equally to some other diseases, not being correct in the converse, which in some sciences, at least, a good definition should be.

Note 6.—P. 98.

And where the diet had been very moderate, as is generally necessary during the employment of ordinary laxatives.

Note 7.—P. 109.

There was a very interesting fact connected with the manipulation. He could feel the point of the slender injecting tube on the outside of the heart itself, where it caused a very peculiar feeling, as may be supposed; and he was enabled from this very circumstance to keep clear of the part. Having had no occasion to employ this extraordinary operation for some time after he did not at my suggestion try it as simple acupuncture, into which perhaps in the opinion of some it would resolve itself. I do not think, however, it would be found so, he having, it seems, several years before, when in pain, for some reason or other, introduced pointed instruments into this part of the breast, without any such effect as that described; and the injecting tube when used remained a very short time inserted. At all events, the safety of throwing air, and that with considerable pressure into the heart-purse, is, so far as a few instances can show, equally established. Mr Lizars and several persons here have witnessed the above, which has been practised on a few other patients; but whatever have been hitherto the results, it is what no one of ordinary cautiousness, would on light occasion rashly have recourse to.

Note 8.—P. 111.

The following case, in which inflammation was threatened, deserves attention. A working man, aged 32, was injured in the region of the os innominatum, and in the course of Poupert's ligament, by severe exertion made in lifting a large stone. He was not seen by me till two or more days after the occurrence. He had, by the direction of the apothecary to whom he had applied, merely used some laxative medicine, but when I saw him, I

considered that, from the strength of his pulse, he would be benefited by the abstraction of twelve or fourteen ounces of blood by venesection, which was accordingly done. The blood was exceedingly buffy, but he did not next day express himself much relieved, the pulse still continuing frequent, though less strong. The part which was so tender as to have its uneasiness increased by very slight pressure, was now directed to be leeches, from which he derived considerable remission of pain, which was still farther removed after the operation of castor oil, which appeared necessary. On the fourth day from that on which he was first seen by me, a message was brought, that he had had a bad night, and on visiting him, he complained much locally and generally, a draught of landanum and camphor giving him only partial relief, but the pulse was under 70, and not strong. He had little appetite, and I considered the case to be just in the state where a more generous diet might lessen pain itself, and the symptoms in general. He was permitted to eat a small quantity of broiled mutton, and to drink about an ounce of spirits mixed with sugar and water. The pain became less soon after, and the pulse lost its frequency. He had a steak again the following day, without the ardent stimulus, and the case proceeded now in every respect as could be wished.

I take the opportunity of this note to remark, that though the instances of *original* inflammatory attack in the text of this section, as it has so happened, are taken from its occurrence in the abdomen, I had no particular reason for so doing; and that though the abdominal functions are peculiar, modifying of course some symptoms, a similar pathology will apply to inflammation commenced in other parts. I have known uneasiness referred to the chest, after copious venesections for pneumonia with destruction of a portion of the lung, leave a patient, on betaking himself to a degree of exercise, and a generous diet; the individual continuing well: And I have seen

the good effect of the cessation of confinement also exemplified in a very different disease, *idiopathic hernia humoralis*, where the affection has become chronic after subjugation of the first symptoms. On local determinations, after the various exanthemata caught by infection, it were needless to enlarge; we have all of us seen sequelæ requiring topical bleeding, but we may also have seen these disappear under measures intended to strengthen generally; local increased action seems to be present in either case, nor is the difference of their natures always perceptible.

The following case, where the chest was affected, is instructive. A man, nearly 30 years of age, and above six feet in stature, had during several months of the winter and spring, a sense of weight in the chest, which used to be relieved for a time on his coughing up a little blood, as he very frequently did during the above period. Coughing was easily brought on, and the pulse was generally about 80 and above this in the minute, but varied from 70 to 90. He was naturally somewhat anxious about himself, but was encouraged not to despond, and to direct his own attention as little as possible to his pulse, as tending to excite it. He took an anodyne and the squill at such times as he suffered more particularly, and aperients of course when requisite. The spontaneous bleeding from the chest was kept under by occasional leeching, when the sense of weight indicated the propriety, and though only remaining in the house in very cold days, he found himself better on avoiding all vinous stimulus in the present diathesis. He used animal food also very sparingly, and attended to the warmth of the extremities. His state improved considerably, and in the beginning of summer he went to reside in the country fifty miles north of this city. He returned here towards the end of autumn, when I had an opportunity of seeing him. His pulse was now under 60 in the minute. He told me he had been much upon horseback, had been indulging in much more

wine than I would have thought right for him, sometimes a quart per day, and had ceased any particular restriction in diet. He had become fleshy and robust.

Note 9.—P. 116.

According to M. Legallois, the spine would be more an object of attention here ???

Note 10.—P. 146.

A gentleman had an unaccountable quickness of pulse, which continued for many weeks, it being generally as frequent as 94 in the minute, and still higher. The heart was suspected to be diseased, and there was some dropsy of the extremities. Every symptom subsided on the swelling of one of his feet in gout, which was not apprehended. He is elderly, and is now quite well.

Note 11.—P. 146.

In a person between 70 and 80, the pulse for four or more years before death, was seldom above thirty-six in the minute, sometimes as low as twenty-six; beating pretty firmly, and generally regularly, though sometimes there was an almost imperceptible intermediate smaller stroke to be indistinctly felt. Considerable dyspnœa affected this person, but the dissection exhibited nothing particular about the valves of the heart, or those of the great vessels, or the other appendages. The parts were all rather larger than is common, but in no other respect differing from their ordinary appearance. Similar specimens, with similar histories, are to be found in some collections of morbid anatomy. Peculiar states of the air-cells of the lungs, and other causes have a share in producing those curious effects as to sound, which pulsations sometimes exhibit in cases where we do not apprehend structural diseases of the heart. I have known impulse and sound distinctly communicated to fluids and air in the stomach and bowels at particular times,

by the strokes of the heart, in a case where the person then, and for more than twelve years after, could run rapidly up steep ascents, lived rather freely, and enjoyed good health.

Note 12.—P. 184.

One may sometimes see in cases of greater hazard, that even an ordinary stimulating injection shall produce the sickness more apt to attend the administration of medicine by the mouth: I do not mean here that short nausea, which very often just precedes a stool, but a repeated inversion of the peristaltic motion, or whatever constitutes this state. However anxious we may be to have a motion per anum, in these cases, disappointment too often follows what would in most circumstances be good practice, that is repeating the doses. Thickish oat gruel of a gritty consistence, or whatever can be retained without loathing, and given at intervals of about three hours, or according to circumstances, will sometimes make its way through, when the worst is to be expected from the continuance of the nausea and irritated state of the parts, almost empty, and for the present incapable of enduring aperients. A careful observation of the egesta for several days after the symptoms have terminated happily, have proved to me in a variety of cases, that the parts are often void of those collections which it is well known are sometimes to be met with.

Note 13.—P. 210.

I am quite aware the analogy here is by no means accurate; but the sort of relief afforded is so very similar, as several may have experienced in their own persons, that I cannot help using the illustration which is given.

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